

Date: 10/24/2012

From: Jolleen Werst, Senior Cost Recovery Specialist

*Jolleen Werst*

To:

*RV HOPKINS*

Site File

Subj: Documents for Contract 68-W6-0012

The attached documents are site specific documents for contract 68-W6-0012. These documents need to be kept as a package as they were received as the Project Officer's files and are being kept for cost recovery purposes.

The documents pertain to TDD# *507-9902-009* under contract 68-W6-0012.

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5.0

ES

## DOCUMENT LOG SHEET

TDD# S07-9902-009

PAN# 1166RVSFXX

PROJECT NAME: R.V. Hopkins Site

CITY/COUNTY/STATE: Davenport, Iowa

PROJECT LEADER: GADT

EPA CONTACT: SCOTT HAYES

COMPLETION DATE:

SOURCE OF FUNDS: (Shaded Area Below)

08-30-99

CERCLA

OPA/CWA

CEPP

X

TDD: 02-18-99 LKS

AOC:

## DELIVERABLES

FORMAL REPORT:

LETTER REPORT: Trip Report Final Report dated 9-3-99 (9-15-99 LKS)

FORMAL BRIEFING:

OTHER (SPECIFY):

VENDER PACKET:

ADMIN. REC.:

DISKS:

PRINTOUTS:

MEMO:

VERBAL BRIEFING-NO DELIVERABLE NEEDED:

OTHER (SPECIFY):

SITE SAFETY PLAN:

LOG BOOK(S) (HOW MANY): 1

PHOTOGRAPHS:

PHOTOGRAPHIC RECORD:

CONFLICT OF INTEREST (COI) FORM: Filed 7-13-99 (QD)

TYPING REQUEST FORM(S): 9-15-99

OTHER (SPECIFY): Add Well Abandonment Record, subcontract for abandonment services, Access agreement, TC RS

PROJECT LEADER INITIALS/DATE:

je 9/13/99

Place An "X" Next To Document Being Filed. Include Date of Document, Name of Document (or brief description), Date Filed, and Your Initials.

(b) (4)

Scott Hayes

02/10/99

Signed On:

**B. Reviewed and Approved By: - Signed by Paul Doherty/SUPR/R7/USEPA/US on 02/11/99 07:12:50 AM, acc**

**Project Officer:**

A handwritten signature in black ink, appearing to read 'Paul Doherty', with a large circular flourish at the beginning.

Paul Doherty

02/11/99

Signed On:

(b) (4)

## CONFLICT OF INTEREST CERTIFICATION

### REGION 7

Date: Feb. 16, 1999  
Site: R.V. Hopkins Site  
Davenport, IA  
TDD #: S07-9902-0009  
Charge #: 609KJ0704  
Pan #: 071166RVSFXX

With respect to the location listed above, to the best of my knowledge and belief, Ecology and Environment, Inc. has no knowledge of any actual or potential conflict of interest (COI).

E & E recognizes its continuing obligation to report any actual or potential COI that may arise during the course of a project or in the event of subsequent work assignments at this site.

Personnel who perform work under this TDD or relating to the TDD, have been informed of their obligation to report personal and organizational conflicts of interest to the START Program Manager.

Robert C. Overfelt  
START Program Manager

Gamie Sotomayor Signature  
for RCO

**PUBLICATION TRACKING FORM**  
(To Be Completed By Project Manager/Author)

PROJECT TITLE/SITE NAME: R.V. Hopkins Site

PROJECT MANAGER/AUTHOR: Tracy Braig

PROJECT DIRECTOR/STARTL: Bob Overfelt

TECHNICAL EDITOR: Gary Haden

PEER REVIEWER: Patty Currier

GRAPHICS: Mark Mayo

JOB NO.: KJ7104

TDD NO.: 507-9902-009

PAN NO.: 1166RVSEXX

NATURE OF DOCUMENT: Trip Report

WORD PROCESSOR: Linda

DUE DATE: 8/30/99

STEP	LIST ALL REVIEWERS/WORD PROCESSORS IN PREFERRED SEQUENCE	DATE SUBMITTED	DATE REQUIRED	REVIEWED BY/TYPED BY	
				INITIALS	DATE
1	Patty Currier	8/20/99		PC	8/21/99
2	Tracy Braig			AB	8/23/99
3	Jeff Gantt	8/23/99		YG	8/30/99
4	Tracy Braig			AB	9/1/99
5	Bob Overfelt	9/1/99		RO	9-1-99
6	Tracy Braig			AB	9/2/99
7	Linda Schomayer	9/2/99			
8					
9					
10					

**PREFERRED FINAL APPROVAL STEPS**

11	Project Director/STARTL Approval			RO	9-1-99
12	Word Processor/Finalize/Format/Put on Letterhead			AKS	9-3-99
13	Project Director/STARTL Sign-off (Gives to support staff to make copies)			RO	9-3-99
14	Word Processor Sign-off (Copies and Sends Out)				

**PRIORITY LEVEL:**

Please circle appropriate number and initial in the space provided.

1+

RO

2

3

**SPECIAL INSTRUCTIONS:**

AOC Description Attached?

STARTL/ASTARTL Initials (Draft AOC)?

Spell Check? Dates? AKS 9-3-99

Copies Made? Number?

Other Instructions: Please make an extra copy for my files. Thanks!!

DATE FILED: 9/15/99



## ecology and environment, inc.

International Specialists in the Environment

Cloverleaf Building 3, 6405 Metcalf

Overland Park, Kansas 66202

Tel: (913) 432-9961, Fax: (913) 432-0670

### MEMORANDUM

TO: Paul Doherty, EPA/START PO

FROM: Jeff Gadt E & E/STM, Tracy Braig BRAL/STM *B*

THRU: Robert Overfelt, CPG, E & E/START PM *RCO*

DATE: September 3, 1999

SUBJECT: Final Report for R.V. Hopkins Monitoring Well Abandonment, Davenport, Iowa

TDD: S07-9902-009

PAN: 1166RVSFXX

CERCLIS: IAD022096028

EPA OSC: Scott Hayes

### INTRODUCTION

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986, the Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Emergency Response and Removal Program to procure a licensed drilling subcontractor and oversee and document the abandonment of a monitoring well at the R.V. Hopkins site in Davenport, Iowa (see Attachment 1: Figure 1: Site Location Map). START field activities were conducted under Technical Direction Document (TDD) S07-9902-009; the subcontracted services of a state-licensed driller were conducted under TDD S07-9905-017. The 15 foot deep, 2-inch PVC monitoring well was installed in June 1984 on the Midwest Metals, Inc., property as part of a site investigation of the adjoining R.V. Hopkins site in Davenport, Iowa (Attachment 2: Figure 2: Site Sketch). In early 1999, representatives of Midwest Metals, Inc., had requested that the monitoring well be properly abandoned because the integrity of the protective concrete pad and well cover had been compromised, apparently by frost heave.

Jeff Gadt was assigned as the START project manager. Aquadrill, located in Coralville, Iowa, was selected as the state-licensed drilling subcontractor for the abandonment. Additional tasks outlined by EPA included oversight of the subcontractor during well abandonment activities under TDD S07-9902-009. START team members (STMs) Patty Currier and Tracy Braig conducted oversight of the well abandonment activities.

## **SITE ACTIVITIES**

STMs Patty Currier and Tracy Braig arrived on site at 0900 hours on August 13, 1999. STMs met with Gene Pierce, a representative of Midwest Metals, Inc., before well abandonment activities began. STM Currier described the abandonment procedures, and Pierce showed the STMs the location of the well to be abandoned. START conducted a reconnaissance of the site of the well to be abandoned and to determine the accessibility of the well for the drill rig. Steve Wilson and Chad Crabtree of Aquadrill arrived on site at 0930 hours with a CME-55 all-terrain drill rig. Team members met with the Aquadrill personnel upon arrival at the site. Abandonment activities began at 0945 on August 13, 1999.

The CME-55 all-terrain rig was decontaminated prior to abandonment activities. The procedures for the abandonment consisted of pulling all well materials completely out and away from the borehole, including the well protector, pad, and entire length of casing and screen. When the well was initially opened, prior to its abandonment, air monitoring was conducted with an HNu. The reading at the well head was at background levels. Static water level was also determined prior to the abandonment. The static water level was 7.3 feet below the top of casing (BTOC) and the total depth of the well was 11.9 feet BTOC. (Note: The well casing, well protector, and pad had come out of the ground approximately two feet due to the apparent frost heave action). After removal of the well, the filter pack in the borehole caved in to five feet below ground surface (BGS). Tremie pipe was forced into the sand with pressurized water and the borehole cleared of the filter pack material. The hole was then filled with high-solids bentonite grout from the bottom up to the surface using the tremie pipe.

The well protector and pad were removed from around the well. The rig augered down to approximately four feet below ground surface. The augered out borehole was then filled with a portland cement cap which was emplaced above the grout. Compacted native soil and sod were then placed on the portland cement cap and graded so that surface water would drain away from the area. All well materials, PVC, protectors, and concrete were disposed of as non-hazardous waste by the subcontractor. Representative photographs were taken of the well and the abandonment activities, and are included in

Attachment 4. Well abandonment of the monitoring well was completed, including cleanup of the site, at 1230 hours on August 13, 1999. The Well Abandonment Registration Record was filed with the Iowa Department of Natural Resources (IDNR) and a copy is included in Attachment 3.

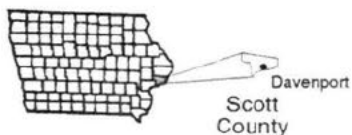
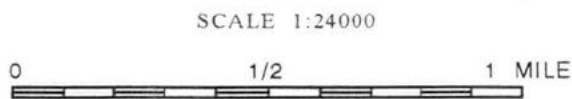
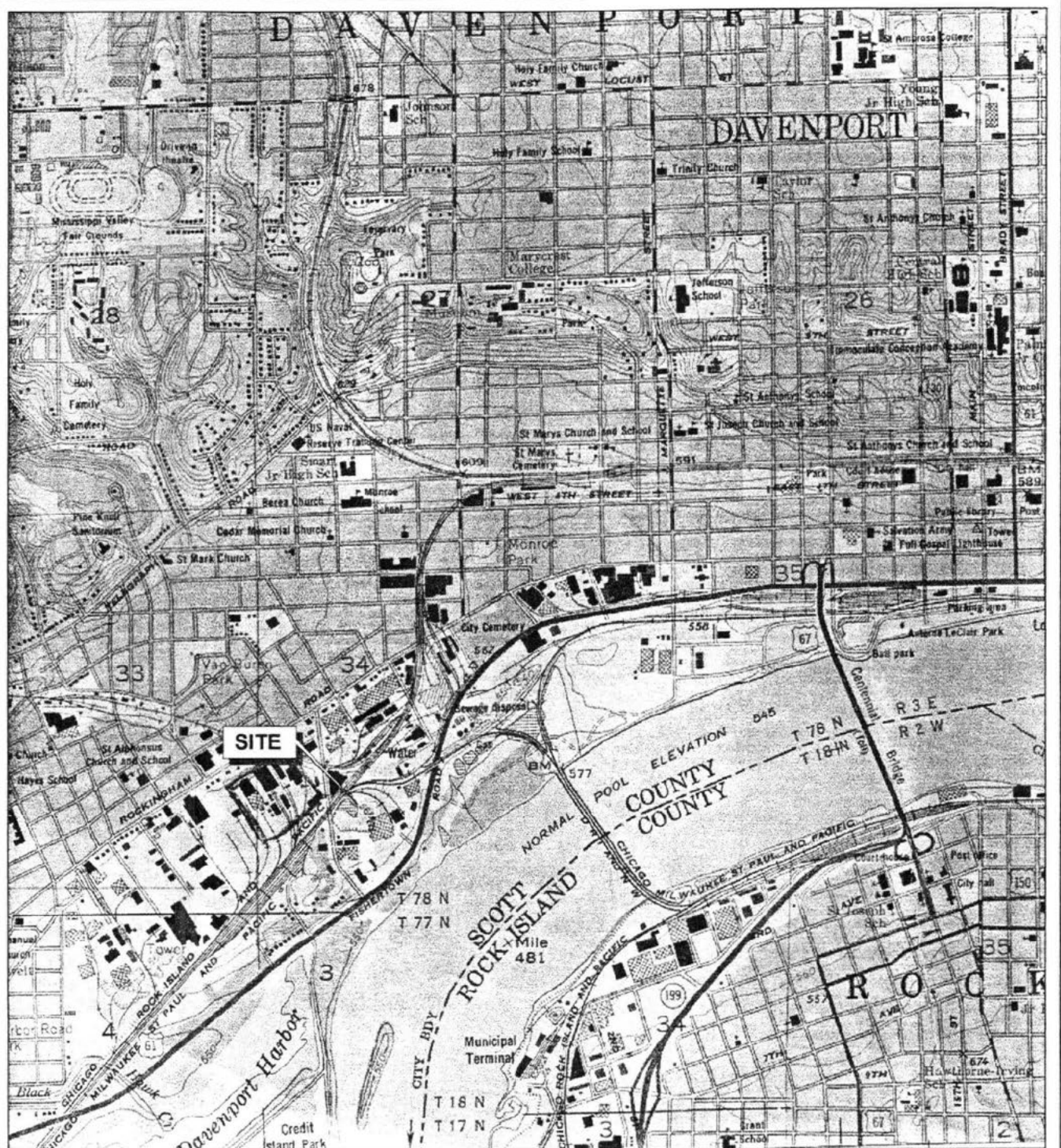
**ATTACHMENTS:**

1. Figure 1: Site Location Map
2. Figure 2: Site Sketch
3. IDNR Well Abandonment Registration Record
4. Photographic Documentation

## **ATTACHMENT 1**

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**Figure 1: Site Location Map**



### R.V. Hopkins Site Davenport, IA

TDD: S07-9902-009  
PAN: 1166RVSFXX  
Prepared by STM M.R. Mayo  
August 1999

Figure 1: Site Location Map

## **ATTACHMENT 2**

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### **Figure 2: Site Sketch**



HDR Engineering, Inc.

## Site Plan

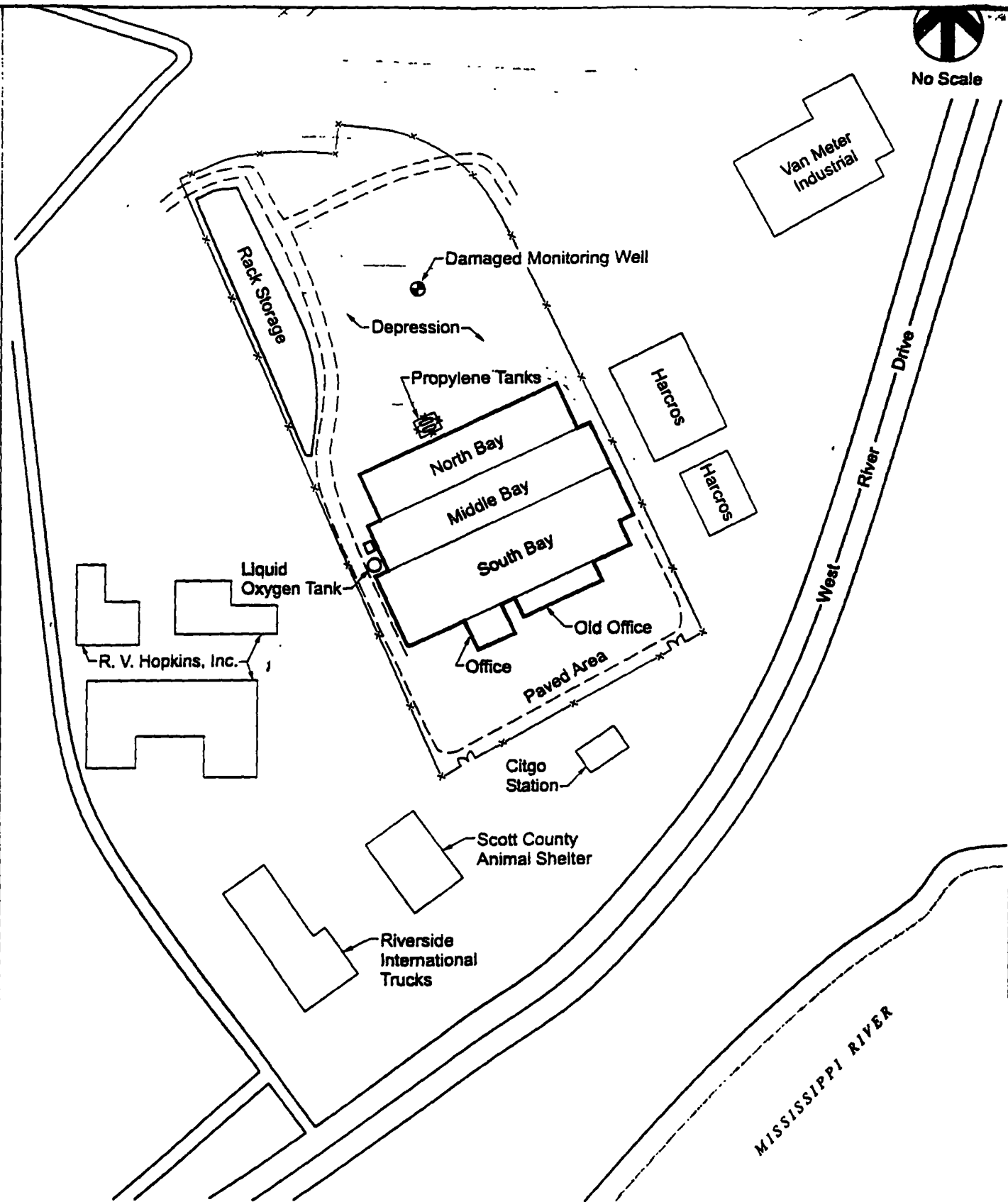
MIDWEST  
METALS,  
INC.

Midwest Metals, Inc.  
Davenport, Iowa Facility

Date

Figure

2



**ATTACHMENT 3**

---

**IDNR Well Abandonment Registration Record**

# Iowa Department of Natural Resources

## Abandoned Water Well Plugging Record

### 1. Owner:

Name: <u>EP2/Ecology &amp; Envir.</u>	City: <u>Overland Park</u>	State: <u>KS</u>
Address: <u>6405 Metcalf</u>	Zip: <u>66202</u>	Phone: <u>913) 432-9961</u>

### 2. Well (Cistern) Location:

PWSID#: \_\_\_\_\_

NW 1/4 of, SE 1/4 of, SW 1/4 of, Section 34, Twp. 78 N, Range 3 West/East(circle one)  
Scott County, Describe well location on property: NW-4: 2" PVC well  
w/ TD=15' installed N of Midwest Metals and NE of RV Hopkins

### 3. Description:

Well depth: <u>15</u> ft.	Casing material: steel, <u>plastic</u> , concrete, clay, brick, stone
Depth to water: _____ ft.	(circle one)
Casing diameter: <u>2</u> in.	Type of construction: <u>drilled</u> , driven, bored, dug, augered
Yr. or decade constrd.: <u>1984</u>	(circle one)
Depth of casing: <u>15</u> ft.	Check <input checked="" type="checkbox"/> if this is a Monitoring Well Well I.D.: <u>NW-4</u>

Check ☐ if Cistern depth: \_\_\_\_\_ ft. diameter: \_\_\_\_\_ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: [Signature] Date Plugged: 8/13/99

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: [Signature] Cert. No. 40441

OR. If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Eligible for Grants-to-Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

Water Supply Section  
Department of Natural Resources  
900 East Grand Avenue  
Des Moines, IA 50319-0034

## **ATTACHMENT 4**

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### **Photographic Documentation**

**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

---

**SITE NAME:** R.V. Hopkins Well Abandonment

**SITE LOCATION:** Davenport, Iowa

**JOB#:** KJ7104      **TDD:** S07-9902-009

**PAN:** 1166RVSFXX

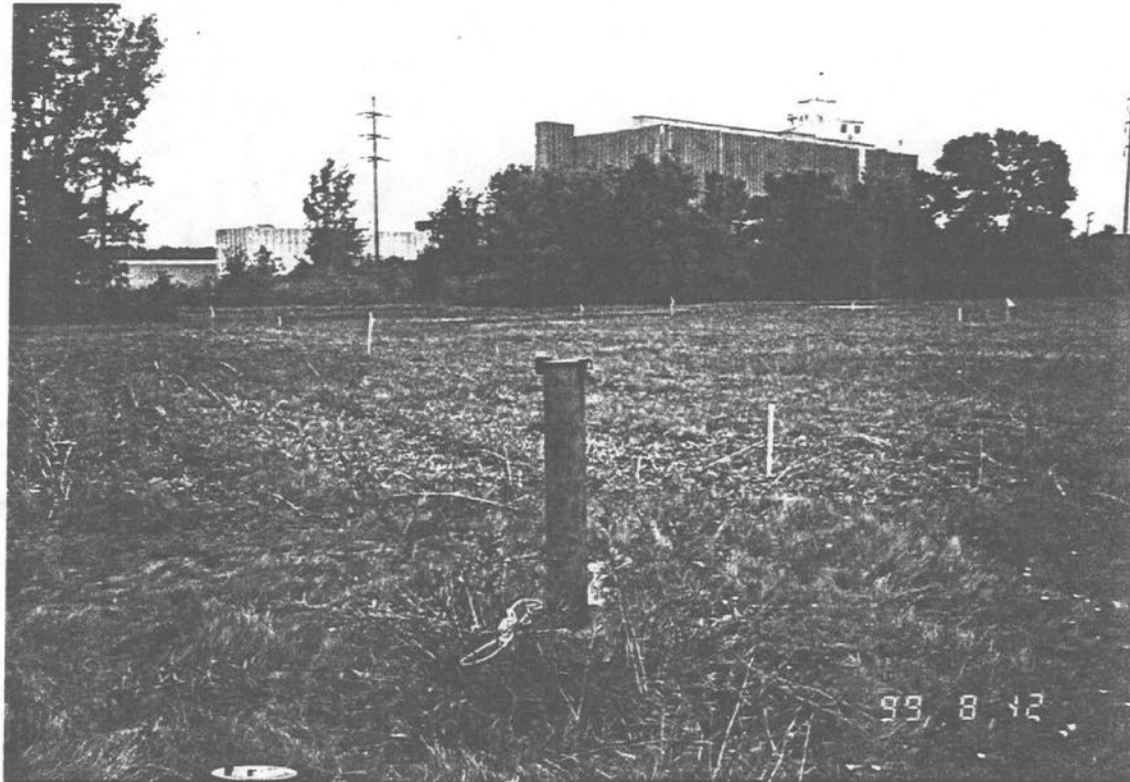
**Photographer:** Braig

**Date/Time:** 08-13-99/0945

**Roll/Frame No.:** 1/1

**Direction:** NNE

**Comments:** Monitoring well  
prior to abandonment.



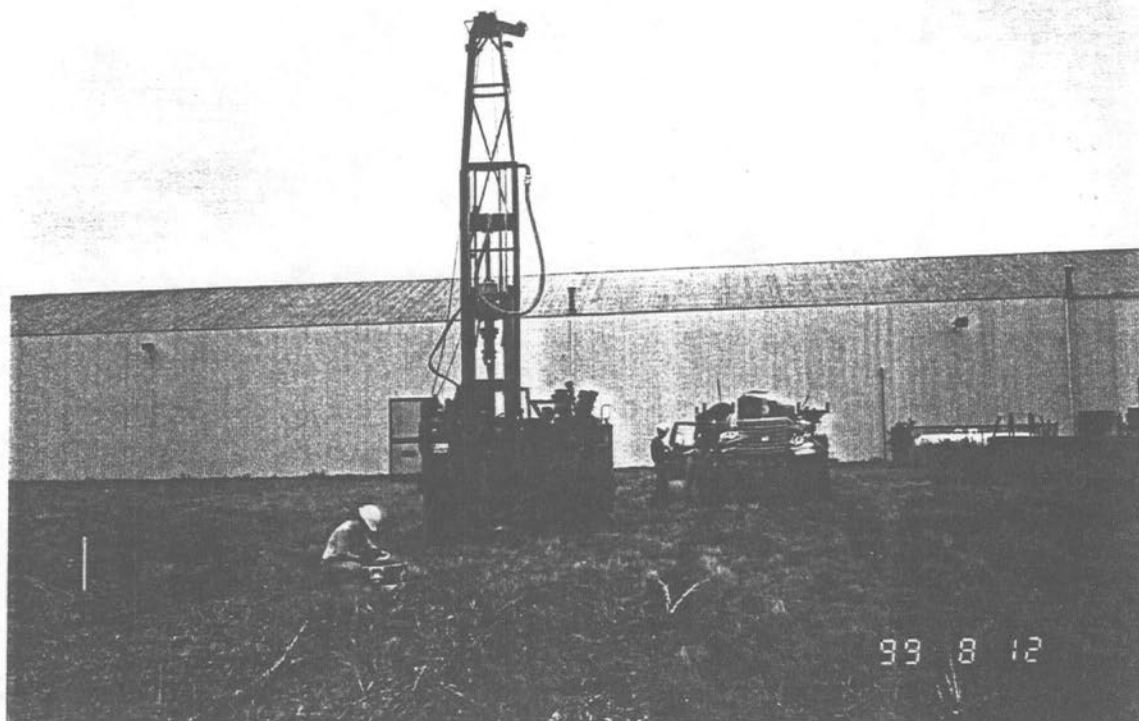
**Photographer:** Currier

**Date/Time:** 08-13-99/1000

**Roll/Frame No.:** 1/2

**Direction:** S

**Comments:** Rig set up over  
well prior to abandonment.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

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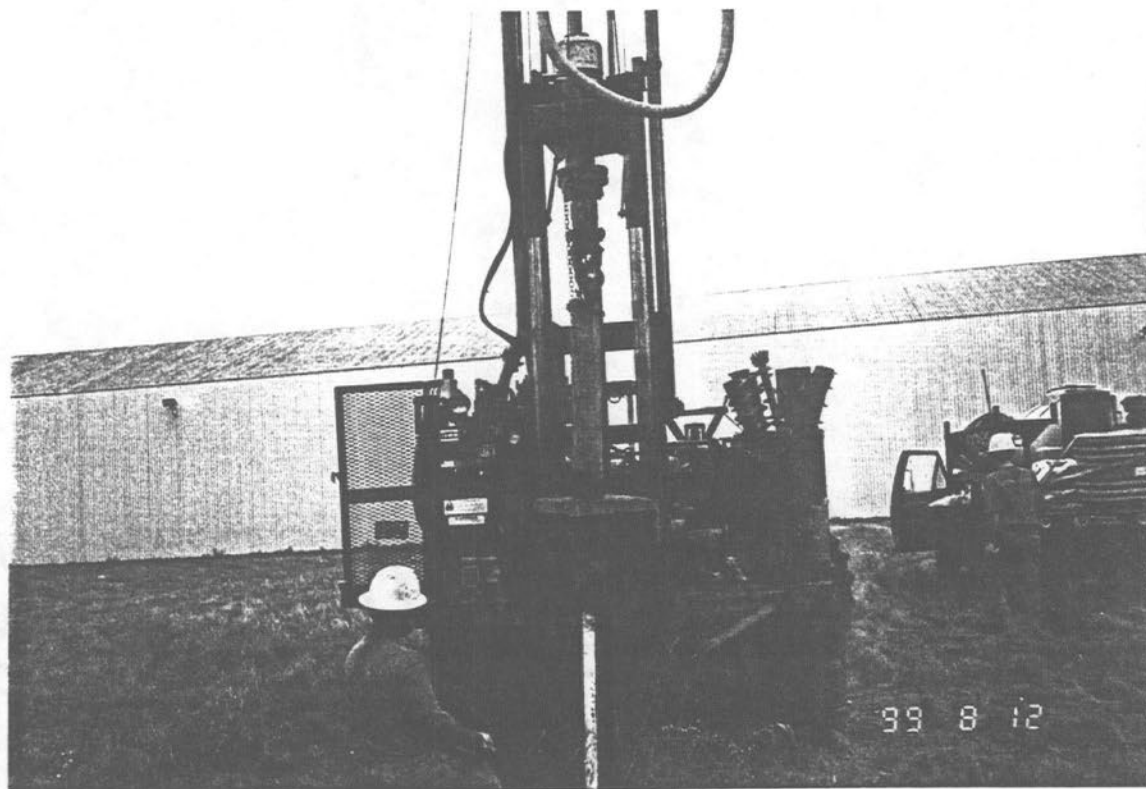
**Photographer:** Currier

**Date/Time:** 08-13-99/1005

**Roll/Frame No.:** 1/3

**Direction:** S

**Comments:** Drillers pulling  
the well casing, protector,  
and pad.



**Photographer:** Currier

**Date/Time:** 08-13-99/1010

**Roll/Frame No.:** 1/4

**Direction:** S

**Comments:** Drillers pulling  
the well and screen.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

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**SITE NAME:** R.V. Hopkins Well Abandonment

**SITE LOCATION:** Davenport, Iowa

**JOB#:** KJ7104     **TDD:** S07-9902-009

**PAN:** 1166RVSFXX

---

**Photographer:** Currier

**Date/Time:** 08-13-99/1205

**Roll/Frame No.:** 1/5

**Direction:** S

**Comments:** Area where well  
was located following well  
abandonment.





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International Specialists in the Environment

Cloverleaf Building 3, 6405 Metcalf

Overland Park, Kansas 66202

Tel: (913) 432-9961, Fax: (913) 432-0670

### MEMORANDUM

TO: Paul Doherty, EPA/START PO

FROM: Jeff Gadt E & E/STM, Tracy Braig BRAL/STM *JB*

THRU: Robert Overfelt, CPG, E & E/START PM *RCO*

DATE: September 3, 1999

SUBJECT: Final Report for R.V. Hopkins Monitoring Well Abandonment, Davenport, Iowa

TDD: S07-9902-009

PAN: 1166RVSFXX

CERCLIS: IAD022096028

EPA OSC: Scott Hayes

### INTRODUCTION

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Attachment 4. Well abandonment of the monitoring well was completed, including cleanup of the site, at 1230 hours on August 13, 1999. The Well Abandonment Registration Record was filed with the Iowa Department of Natural Resources (IDNR) and a copy is included in Attachment 3.

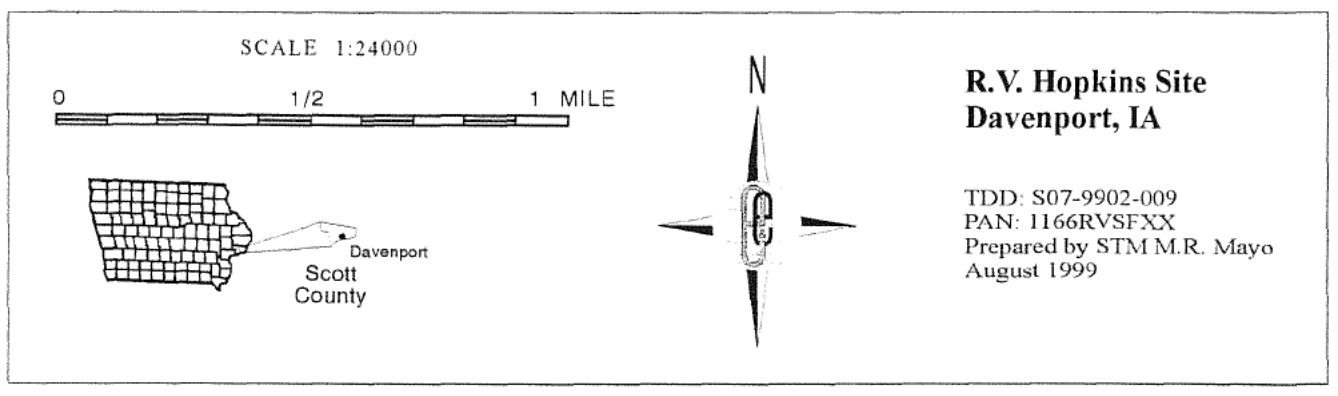
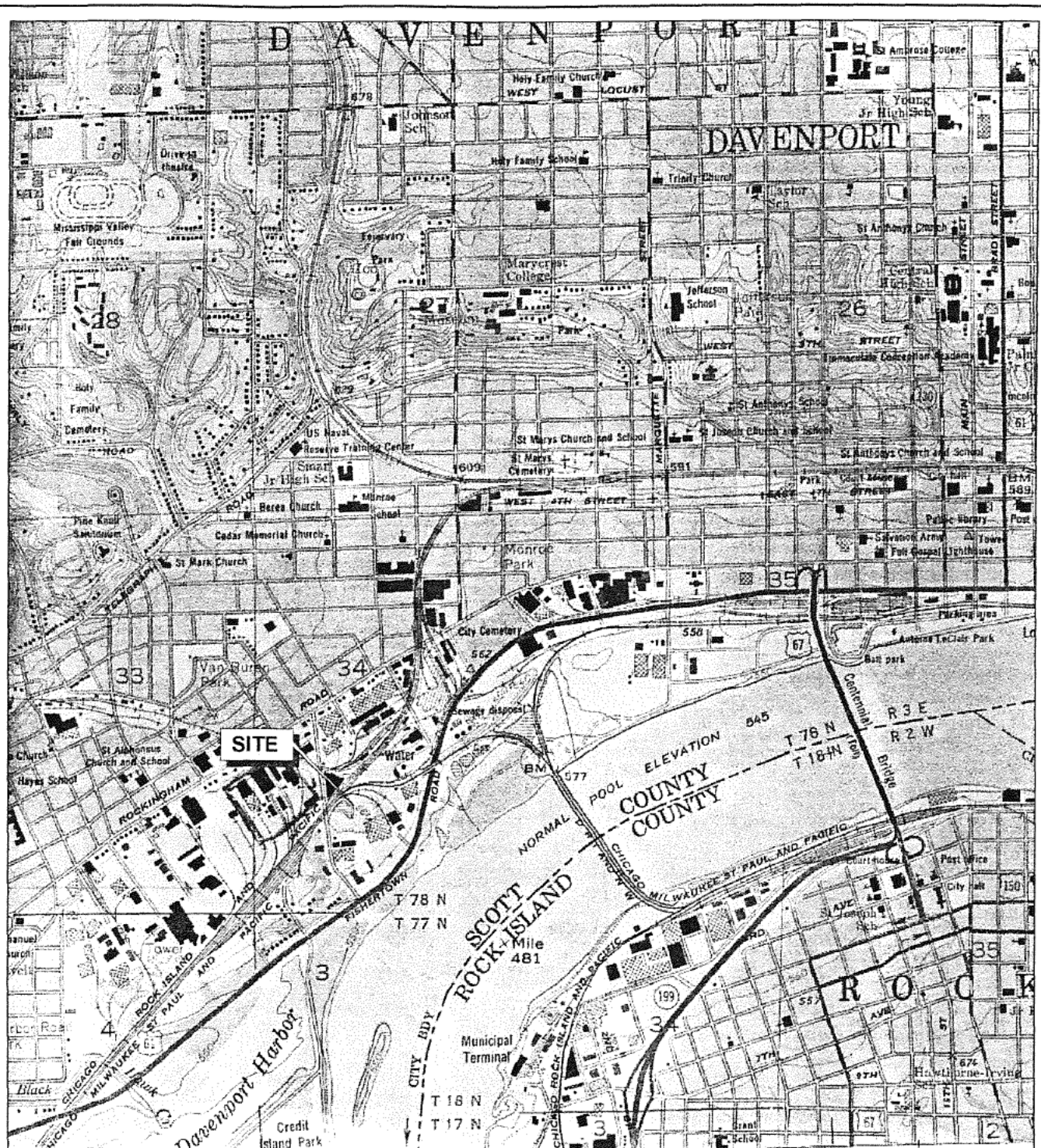
**ATTACHMENTS:**

1. Figure 1: Site Location Map
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4. Photographic Documentation

## **ATTACHMENT 1**

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**Figure 1: Site Location Map**



RVHOPSL CDR

Source: USGS 7.5 minute series, 1975  
Davenport East, IA-ILL Quad.

Figure 1: Site Location Map

## **ATTACHMENT 2**

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**Figure 2: Site Sketch**



HDR Engineering, Inc.

## Site Plan

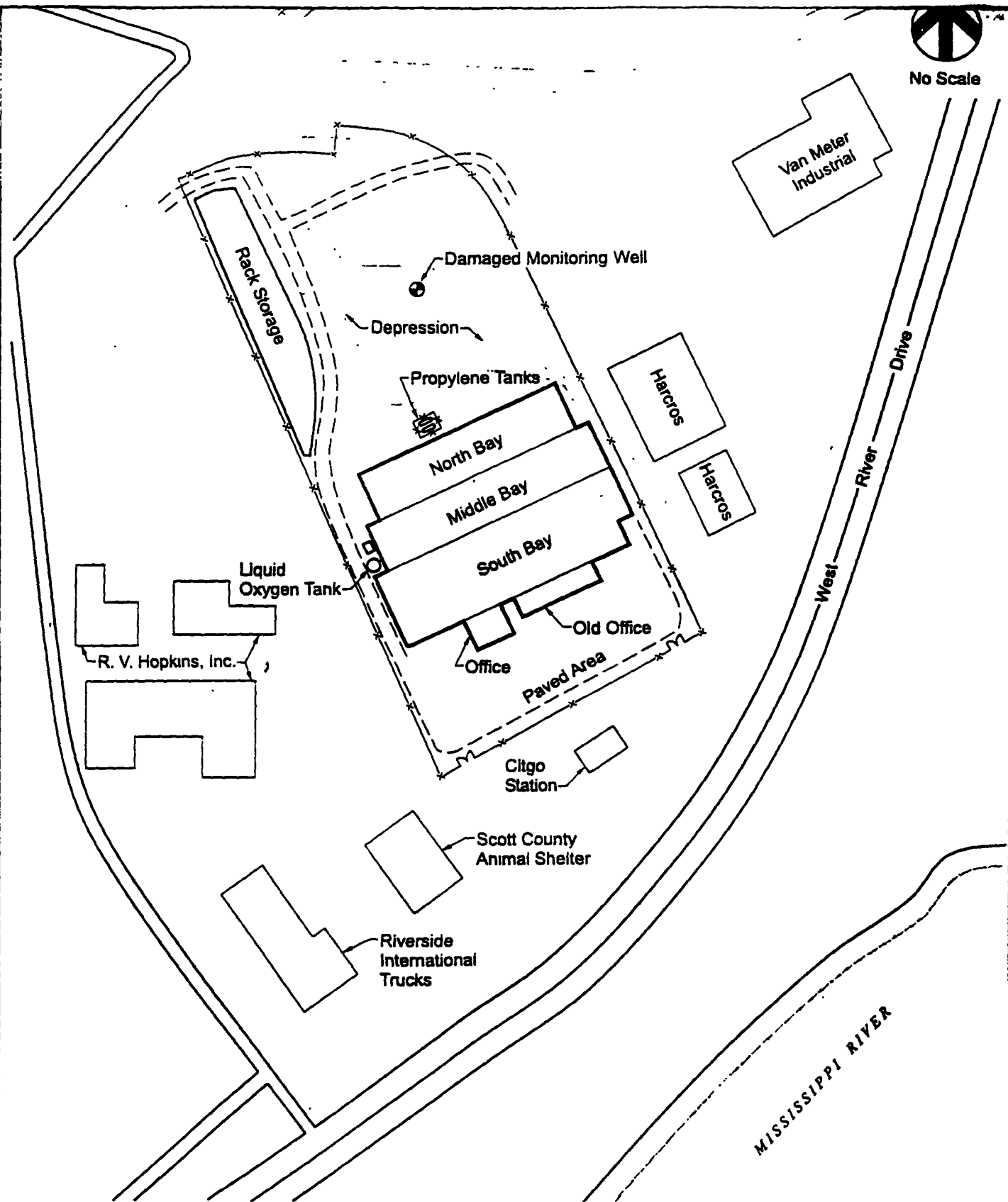
MIDWEST  
METALS,  
INC.

Midwest Metals, Inc.  
Davenport, Iowa Facility

Date

Figure

2



**ATTACHMENT 3**

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**IDNR Well Abandonment Registration Record**

# Iowa Department of Natural Resources

## Abandoned Water Well Plugging Record

### 1. Owner:

Name: <u>EPA/Ecology &amp; Envir.</u>	City: <u>Overland Park</u>	State: <u>KS</u>
Address: <u>5405 Metcalf</u>	Zip: <u>66202</u>	Phone: <u>913)432-9961</u>

### 2. Well (Cistern) Location:

PWSID#: \_\_\_\_\_

NW 1/4 of, SE 1/4 of, SW 1/4 of, Section 34, Twp. 78 N, Range 3 West/East(circle one)  
Scott County, Describe well location on property: MW-4: 2" PVC well  
w/ TD=15' installed N of Midwest Metals and NE of RV Hopkins

### 3. Description:

Well depth: <u>15</u> ft.	Casing material: steel, <u>plastic</u> , concrete, clay, brick, stone
Depth to water: _____ ft.	(circle one)
Casing diameter: <u>2</u> in.	Type of construction: <u>drilled</u> , driven, bored, dug, augered
Yr. or decade constrd.: <u>1984</u>	(circle one)
Depth of casing: <u>15</u> ft.	Check <input checked="" type="checkbox"/> if this is a Monitoring Well Well I.D.: <u>MW-4</u>

Check ☐ if Cistern depth: \_\_\_\_\_ ft. diameter: \_\_\_\_\_ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: [Signature] Date Plugged: 8/13/99

If plugged by certified well contractor, complete this box:

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: [Signature] Cert. No. 40441

OR. If plugged by well owner, complete this box:

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Eligible for Grants-to-Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

**Water Supply Section**  
**Department of Natural Resources**  
**900 East Grand Avenue**  
**Des Moines, IA 50319-0034**

## **ATTACHMENT 4**

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### **Photographic Documentation**

**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

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**SITE NAME:** R.V. Hopkins Well Abandonment

**SITE LOCATION:** Davenport, Iowa

**JOB#:** KJ7104      **TDD:** S07-9902-009

**PAN:** 1166RVSFXX

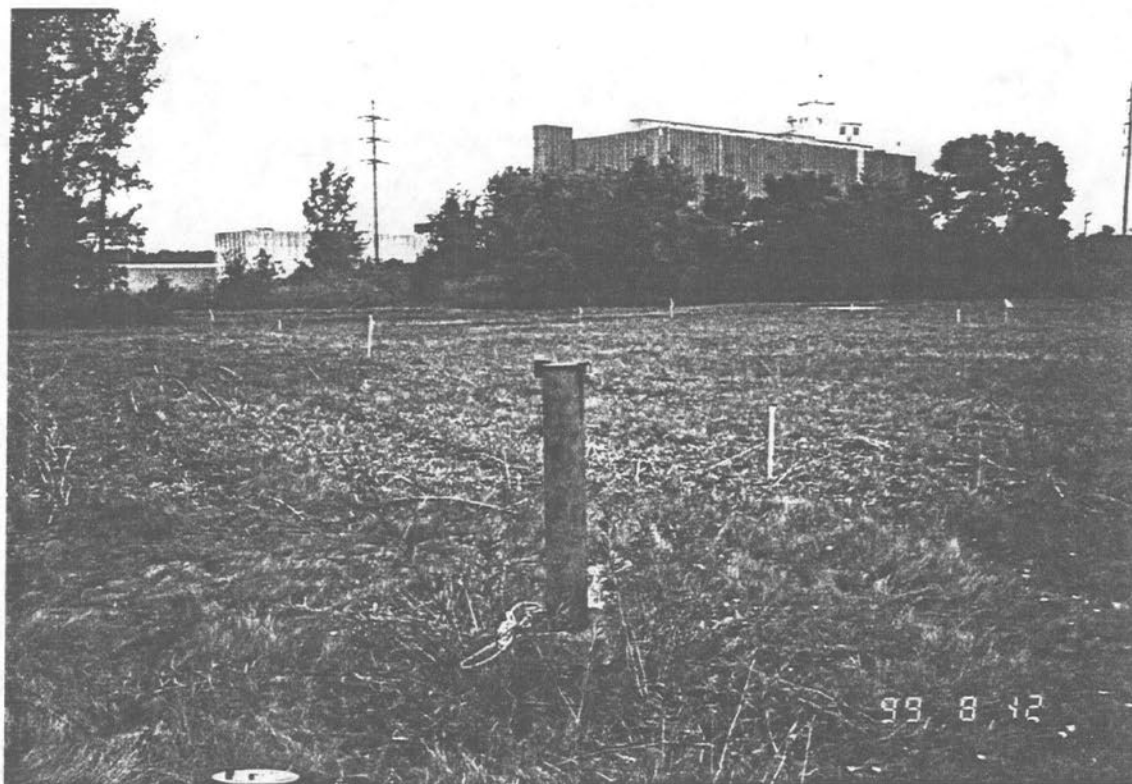
**Photographer:** Braig

**Date/Time:** 08-13-99/0945

**Roll/Frame No.:** 1/1

**Direction:** NNE

**Comments:** Monitoring well  
prior to abandonment.



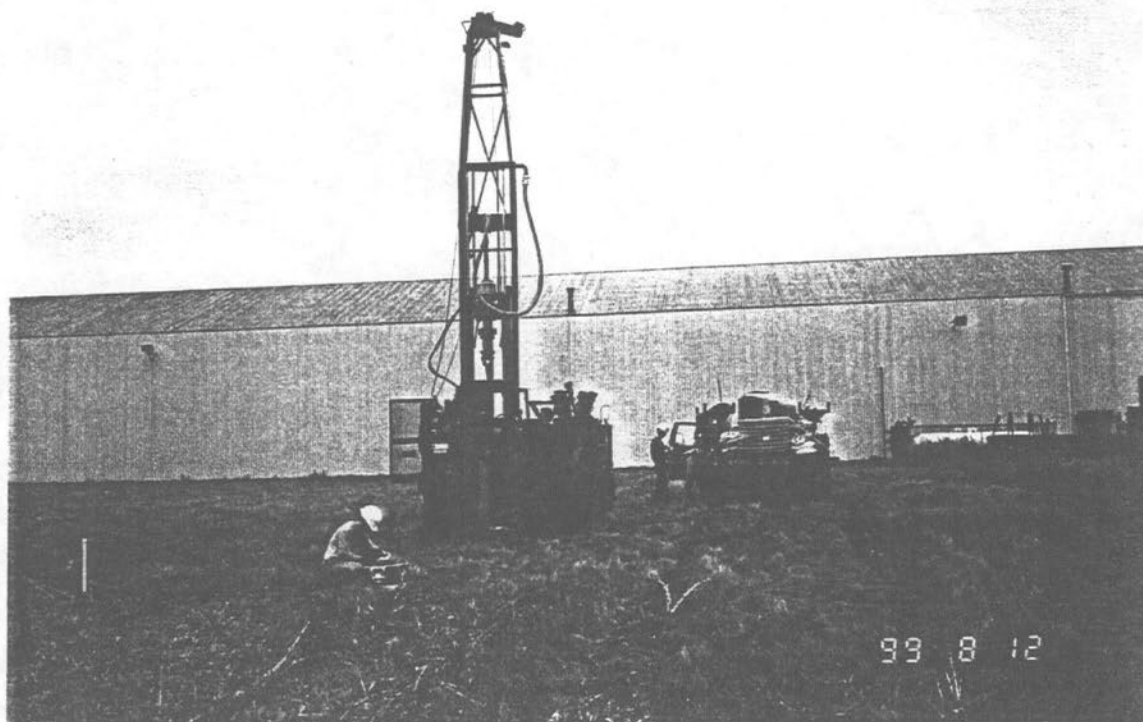
**Photographer:** Currier

**Date/Time:** 08-13-99/1000

**Roll/Frame No.:** 1/2

**Direction:** S

**Comments:** Rig set up over  
well prior to abandonment.



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**Ecology and Environment, Inc.**  
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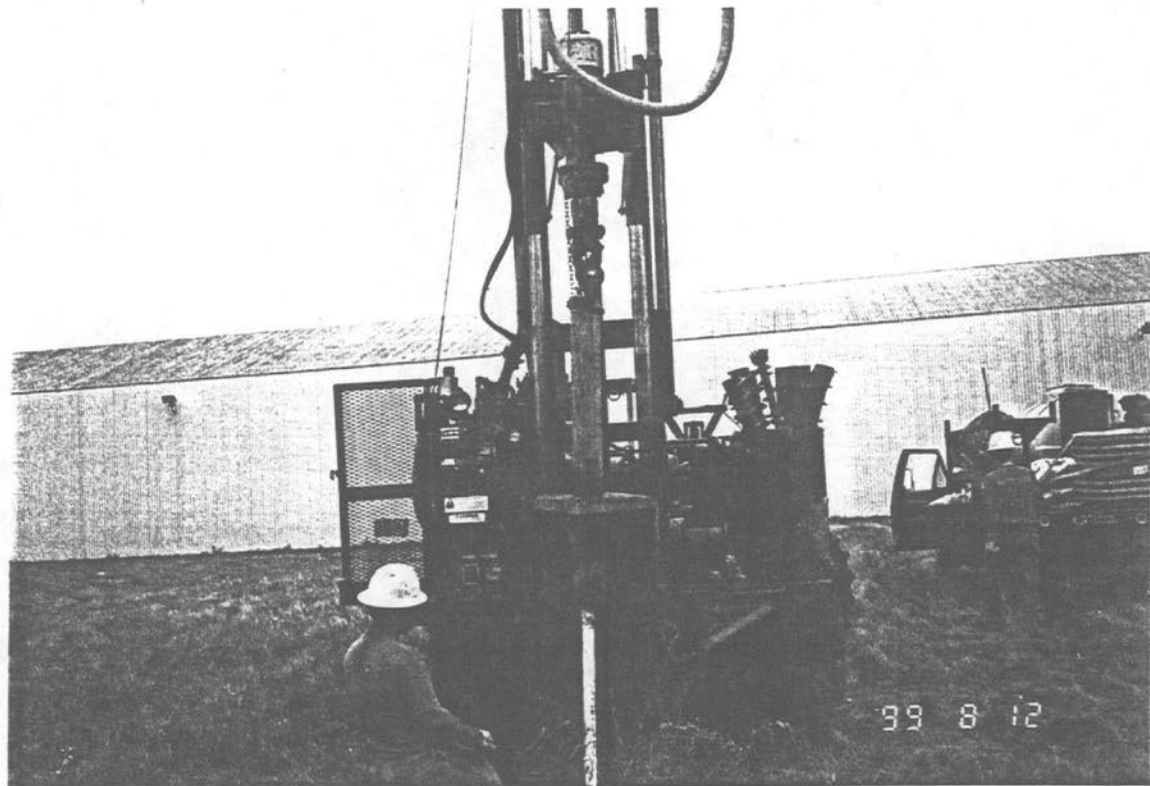
**Photographer:** Currier

**Date/Time:** 08-13-99/1005

**Roll/Frame No.:** 1/3

**Direction:** S

**Comments:** Drillers pulling  
the well casing, protector,  
and pad.



**Photographer:** Currier

**Date/Time:** 08-13-99/1010

**Roll/Frame No.:** 1/4

**Direction:** S

**Comments:** Drillers pulling  
the well and screen.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

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**PAN:** 1166RVSFXX

---

**Photographer:** Currier

**Date/Time:** 08-13-99/1205

**Roll/Frame No.:** 1/5

**Direction:** S

**Comments:** Area where well  
was located following well  
abandonment.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

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**Date/Time:** 08-13-99/0945

**Roll/Frame No.:** 1/1

**Direction:** NNE

**Comments:** Monitoring well  
prior to abandonment.



**Photographer:** Currier

**Date/Time:** 08-13-99/1000

**Roll/Frame No.:** 1/2

**Direction:** S

**Comments:** Rig set up over  
well prior to abandonment.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

---

**SITE NAME:** R.V. Hopkins Well Abandonment

**SITE LOCATION:** Davenport, Iowa

**JOB#:** KJ7104    **TDD:** S07-9902-009

**PAN:** 1166RVSFXX

**Photographer:** Currier

**Date/Time:** 08-13-99/1005

**Roll/Frame No.:** 1/3

**Direction:** S

**Comments:** Drillers pulling  
the well casing, protector,  
and pad.



**Photographer:** Currier

**Date/Time:** 08-13-99/1010

**Roll/Frame No.:** 1/4

**Direction:** S

**Comments:** Drillers pulling  
the well and screen.



**PHOTOGRAPHIC RECORD**  
**Ecology and Environment, Inc.**  
**Superfund Technical Assessment and Response Team**

---

**SITE NAME:** R.V. Hopkins Well Abandonment

**SITE LOCATION:** Davenport, Iowa

**JOB#:** KJ7104      **TDD:** S07-9902-009

**PAN:** 1166RVSFXX

---

**Photographer:** Currier

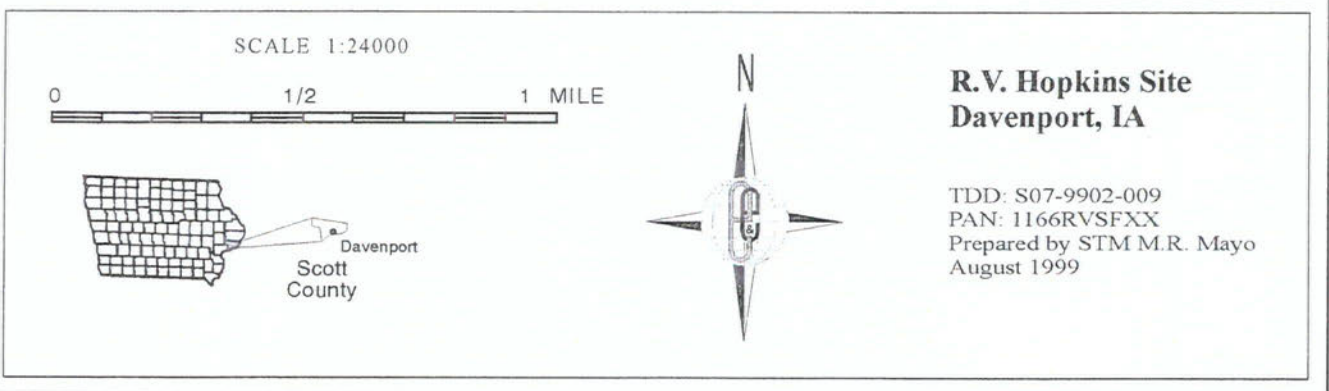
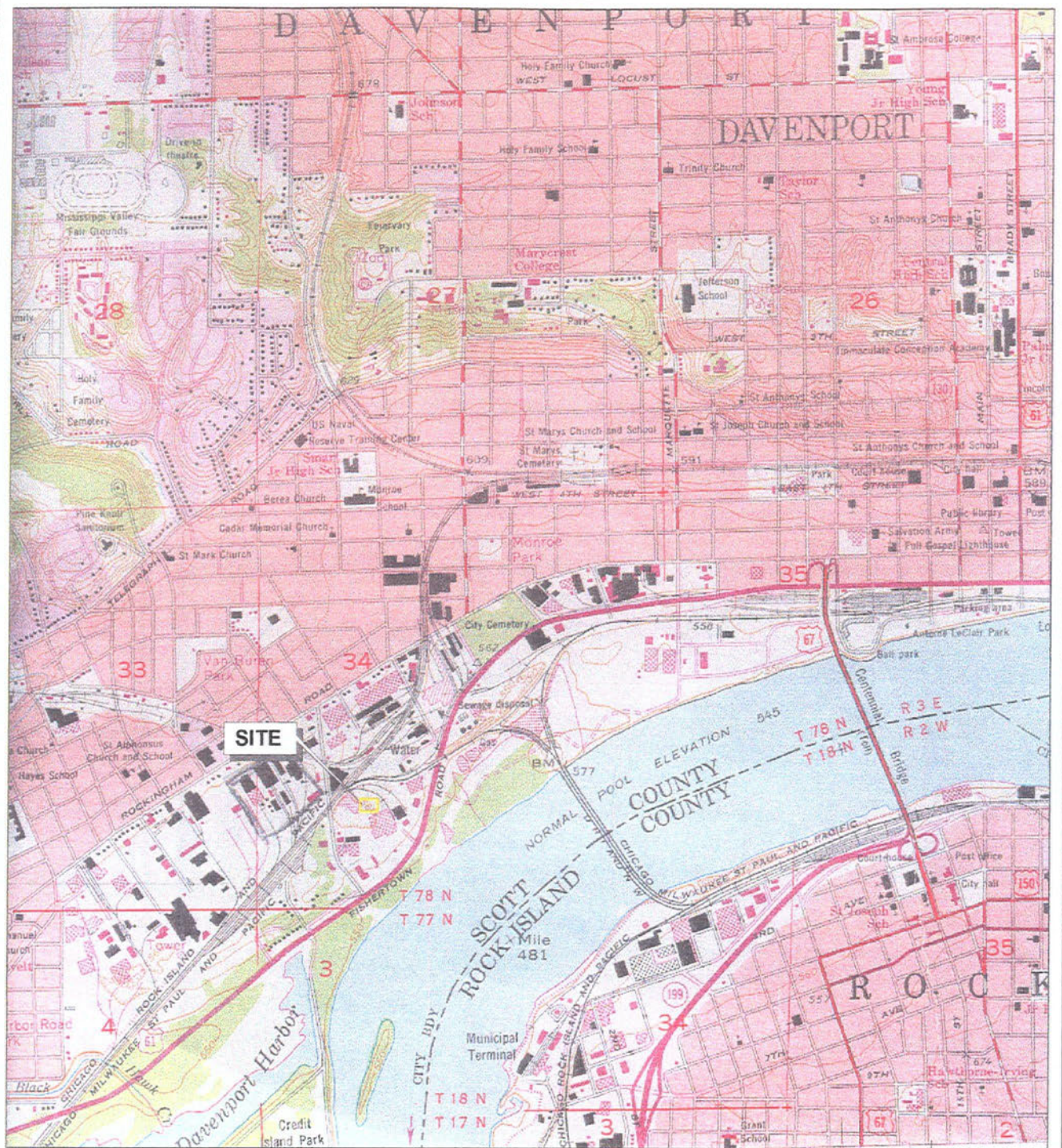
**Date/Time:** 08-13-99/1205

**Roll/Frame No.:** 1/5

**Direction:** S

**Comments:** Area where well was located following well abandonment.





RVHOPSL.CDR

Source: USGS 7.5 minute series, 1975  
Davenport East, IA-ILL Quad.

**Figure 1: Site Location Map**

ecology and environment, inc.

**SITE-SPECIFIC  
HEALTH AND SAFETY PLAN**

Project: RV Hopkins Well site - Well Abandonment

Project No.: KJ7104

TDD/PAN No.: S07-9902-009/1166RVSEXX

Project Location: Davenport, Iowa

Proposed Date of Field Activities: August 13, 1999

Project Director: Bob Overfelt

Project Manager: Jeff Gadt

Prepared by: Jeff Gadt

Date Prepared: August 10, 1999

Approved by: 

Date Approved: Aug 11, 1999

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## 1. INTRODUCTION

### 1.1 POLICY

It is E & E's policy to ensure the health and safety of its employees, the public, and the environment during the performance of work it conducts. This site-specific health and safety plan (SHASP) establishes the procedures and requirements to ensure the health and safety of E & E employees for the above-named project. E & E's overall safety and health program is described in *Corporate Health and Safety Program for Toxic and Hazardous Substances* (CHSP). After reading this plan, applicable E & E employees shall read and sign E & E's Site-Specific Health and Safety Plan Acceptance form.

This SHASP has been developed for the sole use of E & E employees and is not intended for use by firms not participating in E & E's training and health and safety programs. Subcontractors are responsible for developing and providing their own safety plans.

This SHASP has been prepared to meet the following applicable regulatory requirements and guidance:

Applicable Regulation/Guidance
29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER)
Other:

### 1.2 SCOPE OF WORK

Description of Work: See Attachment I

Equipment/Supplies: Attachment I contains a checklist of equipment and supplies that will be needed for this work.

The following is a description of each numbered task:

Task Number	Task Description
1	Provide Oversight on abandoning of 15'x2" well

### 1.3 SITE DESCRIPTION

Site Map: A site map or sketch is attached at the end of this plan.

Site History/Description (see project work plan for detailed description): START has been tasked oversee the abandon of a 15' deep monitoring well on Midwest Metals property that was part of a monitoring well network installed for the RV Hopkins site located to the southwest on the adjacent property. Also see Attachment 1 for further site history and description.

Is the site currently in operation? ☒ Yes ☐ No

Locations of Contaminants/Wastes: Trace contaminants (VOCs) in ground water, source area located on RV Hopkins property to the southwest.

Types and Characteristics of Contaminants/Wastes:

- |  |  |  |  |
|--|--|--|--|
| <input checked="" type="checkbox"/> Liquid   | <input checked="" type="checkbox"/> Solid    | <input type="checkbox"/> Sludge                  | <input type="checkbox"/> Gas/Vapor     |
| <input type="checkbox"/> Flammable/Ignitable | <input checked="" type="checkbox"/> Volatile | <input type="checkbox"/> Corrosive               | <input type="checkbox"/> Acutely Toxic |
| <input type="checkbox"/> Explosive           | <input type="checkbox"/> Reactive            | <input checked="" type="checkbox"/> Carcinogenic | <input type="checkbox"/> Radioactive   |
| <input type="checkbox"/> Medical/Pathogenic  | Other: _____                                 |  |  |

### 2. ORGANIZATION AND RESPONSIBILITIES

E & E team personnel shall have on-site responsibilities as described in E & E's standard operating procedure (SOP) for Site Inspection. The project team, including qualified alternates, is identified below.

Name	Site Role/Responsibility
Jeff Gadt (not on site)	Project/Task Manager
Patty Currier	Site Safety Officer

### 3. TRAINING

Prior to work, E & E team personnel shall have received training as indicated below. As applicable, personnel shall have read the project work plan, sampling and analysis plan, and/or quality assurance project plan prior to project work.

Training	Required
40-Hour OSHA HAZWOPER Initial Training and Annual Refresher (29 CFR 1910.120)	X
Annual First Aid/CPR	X
Hazard Communication (29 CFR 1910.1200)	X
DOT and Biannual Refresher	
Other:	

### 4. MEDICAL SURVEILLANCE

#### 4.1 MEDICAL SURVEILLANCE PROGRAM

E & E field personnel shall actively participate in E & E's medical surveillance program as described in the CHSP and shall have received, within the past year, an appropriate physical examination and health rating.

E & E's health and safety record (HSR) form will be maintained on site by each E & E employee for the duration of his or her work. E & E employees should inform the site safety officer (SSO) of any allergies, medical conditions, or similar situations that are relevant to the safe conduct of the work to which this SHASP applies.

#### 4.2 RADIATION EXPOSURE

##### 4.2.1 External Dosimetry

Thermoluminescent Dosimeter (TLD) Badges: TLD badges are required to be worn by all E & E field personnel on all E & E sites.

Sites with known radiation hazards require the completion of form 07:FORMS\_HSP\_EF.WO.

### 5. SITE CONTROL

#### 5.1 SITE LAYOUT AND WORK ZONES

Site Work Zones: Refer to the map or site sketch, attached at the end of this plan, for designated work zones.

Site Access Requirements and Special Considerations: Access has been arranged with Midwest Metals Inc.

Illumination Requirements: All work conducted during daylight hours.

Sanitary Facilities (e.g., toilet, shower, potable water): Midwest Metals facility

On-Site Communications: Cell phone with START personnel, Midwest Metals Inc. (b) (4)

Other Site-Control Requirements: None

## 5.2 SAFE WORK PRACTICES

Daily Safety Meeting: A daily safety meeting will be conducted for all E & E personnel and documented on the Daily Safety Meeting Record form or in the field logbook. The information and data obtained from applicable site characterization and analysis will be addressed in the safety meetings and also used to update this SHASP, as necessary.

Work Limitations: Work shall be limited to a maximum of 12 hours per day. If 12 consecutive days are worked, at least one day off shall be provided before work is resumed. Work will be conducted in daylight hours unless prior approval is obtained and the illumination requirements in 29 CFR 1910.120(m) are satisfied.

Weather Limitations: Work shall not be conducted during electrical storms. Work conducted in other inclement weather (e.g., rain, snow) will be approved by project management and the regional safety coordinator or designee.

Other Work Limitations: None

Buddy System: Field work will be conducted in pairs of team members according to the buddy system.

Line of Sight: Each field team member shall remain in the line of sight and within verbal communication of at least one other team member.

Eating, Drinking, and Smoking: Eating, drinking, smoking, and the use of tobacco products shall be prohibited in the exclusion and contamination reduction areas, at a minimum, and shall only be permitted in designated areas.

Contamination Avoidance: Field personnel shall avoid unnecessary contamination of personnel, equipment, and materials to the extent practicable.

Sample Handling: Protective gloves of a type designated in Section 7 will be worn when containerized samples are handled for labeling, packaging, transportation, and other purposes.

Vermiculite Handling. Respiratory protection (i.e., high-efficiency particulate air filtration) is recommended when vermiculite is used to package samples into shipping containers (some vermiculite contains low concentrations of asbestos).

Other Safe Work Practices: None

## 6. HAZARD EVALUATION AND CONTROL

### 6.1 PHYSICAL HAZARD EVALUATION AND CONTROL

Potential physical hazards and their applicable control measures are described in the following table for each task.

Hazard	Task Number	Hazard Control Measures
Biological (flora, fauna, etc.)	1	<ul style="list-style-type: none"> <li>Potential hazard: _____</li> <li>Establish site-specific procedures for working around identified hazards.</li> <li>Other: _____</li> </ul>
Cold Stress	N/A	<ul style="list-style-type: none"> <li>Provide warm break area and adequate breaks.</li> <li>Provide warm noncaffeinated beverages.</li> <li>Promote cold stress awareness.</li> <li>See <i>Cold Stress Prevention and Treatment</i> (attached at the end of this plan if cold stress is a potential hazard).</li> </ul>
Compressed Gas Cylinders	N/A	<ul style="list-style-type: none"> <li>Use caution when moving or storing cylinders.</li> <li>A cylinder is a projectile hazard if it is damaged or its neck is broken.</li> <li>Store cylinders upright and secure them by chains or other means.</li> <li>Other: _____</li> </ul>
Confined Space	N/A	<ul style="list-style-type: none"> <li>Ensure compliance with 29 CFR 1910.146.</li> <li>See SOP for Confined Space Entry. Additional documentation is required.</li> <li>Other: _____</li> </ul>
Drilling	1	<ul style="list-style-type: none"> <li>See SOP for Health and Safety on Drilling Rig Operations. Additional documentation may be required.</li> <li>Other: _____</li> <li>Other: _____</li> </ul>
Drums and Containers	1	<ul style="list-style-type: none"> <li>Ensure compliance with 29 CFR 1910.120(j).</li> <li>Consider unlabeled drums or containers to contain hazardous substances and handle accordingly until the contents are identified.</li> <li>Inspect drums or containers and assure integrity prior to handling.</li> <li>Move drums or containers only as necessary; use caution and warn nearby personnel of potential hazards.</li> <li>Open, sample, and/or move drums or containers in accordance with established procedures; use approved drum/container-handling equipment.</li> <li>Other: _____</li> </ul>
Electrical	1	<ul style="list-style-type: none"> <li>Ensure compliance with 29 CFR 1910 Subparts J and S.</li> <li>Locate and mark energized lines.</li> <li>De-energize lines as necessary.</li> <li>Ground all electrical circuits.</li> <li>Guard or isolate temporary wiring to prevent accidental contact.</li> </ul>

Once you have a  
4' hole than the  
CFR Regs apply.

Hazard	Task Number	Hazard Control Measures
Electrical (Cont.)	1	<ul style="list-style-type: none"> <li>Evaluate potential areas of high moisture or standing water and define special electrical needs.</li> <li>Other: _____</li> </ul>
Excavation and Trenching	1	<ul style="list-style-type: none"> <li>Ensure that excavations comply with and personnel are informed of the requirements of 29 CFR 1926 Subpart P.</li> <li>Ensure that any required sloping or shoring systems are approved as per 29 CFR 1926 Subpart P.</li> <li>Identify special personal protective equipment (PPE) (see Section 7) and monitoring (see Section 8) needs if personnel are required to enter approved excavated areas or trenches.</li> <li>Maintain line of sight between equipment operators and personnel in excavations/trenches. Such personnel are prohibited from working in close proximity to operating machinery.</li> <li>Suspend or shut down operations at signs of cave in, excessive water, defective shoring, changing weather, or unacceptable monitoring results.</li> <li>Other: _____</li> <li>Other: _____</li> </ul>
Fire and Explosion	1	<ul style="list-style-type: none"> <li>Inform personnel of the location(s) of potential fire/explosion hazards.</li> <li>Establish site-specific procedures for working around flammables.</li> <li>Ensure that appropriate fire suppression equipment and systems are available and in good working order.</li> <li>Define requirements for intrinsically safe equipment.</li> <li>Identify special monitoring needs (see Section 8).</li> <li>Remove ignition sources from flammable atmospheres.</li> <li>Coordinate with local fire-fighting groups regarding potential fire/explosion situations.</li> <li>Establish contingency plans and review daily with team members.</li> <li>Other: _____</li> </ul>
Heat Stress	1	<ul style="list-style-type: none"> <li>Provide cool break area and adequate breaks.</li> <li>Provide cool noncaffeinated beverages.</li> <li>Promote heat stress awareness.</li> <li>Use active cooling devices (e.g., cooling vests) where specified.</li> <li>See <i>Heat Stress Prevention and Treatment</i> (attached at the end of this plan if heat stress is a potential hazard).</li> </ul>
Heavy Equipment Operation	1	<ul style="list-style-type: none"> <li>Define equipment routes, traffic patterns, and site-specific safety measures.</li> <li>Ensure that operators are properly trained and equipment has been properly inspected and maintained. Verify back-up alarms.</li> <li>Ensure that ground spotters are assigned and informed of proper hand signals and communication protocols.</li> <li>Identify special PPE (Section 7) and monitoring (Section 8) needs.</li> <li>Ensure that field personnel do not work in close proximity to operating equipment.</li> <li>Ensure that lifting capacities, load limits, etc., are not exceeded.</li> <li>Other: _____</li> </ul>

Hazard	Task Number	Hazard Control Measures
Heights (Scaffolding, Ladders, etc.)	NA	<ul style="list-style-type: none"> <li>• Ensure compliance with applicable subparts of 29 CFR 1910.</li> <li>• Identify special PPE needs (e.g., lanyards, safety nets, etc.)</li> <li>• Other: _____</li> </ul>
Noise	1	<ul style="list-style-type: none"> <li>• Establish noise level standards for on-site equipment/operations.</li> <li>• Inform personnel of hearing protection requirements (Section 7).</li> <li>• Define site-specific requirements for noise monitoring (Section 8).</li> <li>• Other: _____</li> </ul>
Overhead Obstructions	1	<ul style="list-style-type: none"> <li>• Wear hard hat.</li> <li>• Other: _____</li> </ul>
Power Tools	1	<ul style="list-style-type: none"> <li>• Ensure compliance with 29 CFR 1910 Subpart P.</li> <li>• Other: _____</li> </ul>
Sunburn	1	<ul style="list-style-type: none"> <li>• Apply sunscreen.</li> <li>• Wear hats/caps and long sleeves.</li> <li>• Other: _____</li> </ul>
Utility Lines	1	<ul style="list-style-type: none"> <li>• Identify/locate existing utilities prior to work.</li> <li>• Ensure that overhead, underground, and nearby utility lines are at least 25 feet away from project activities.</li> <li>• Contact utilities to confirm locations, as necessary.</li> <li>• Other: _____</li> </ul>
Weather Extremes	1	<ul style="list-style-type: none"> <li>• Potential hazards: _____</li> <li>• Establish site-specific contingencies for severe weather situations.</li> <li>• Provide for frequent weather broadcasts.</li> <li>• Weatherize safety gear, as necessary (e.g., ensure eye wash units cannot freeze, etc.).</li> <li>• Identify special PPE (Section 7) needs.</li> <li>• Discontinue work during severe weather.</li> <li>• Other: _____</li> </ul>
Other:	None	<ul style="list-style-type: none"> <li>• _____</li> <li>• _____</li> </ul>

## 6.2 CHEMICAL HAZARD EVALUATION AND CONTROL

### 6.2.1 Chemical Hazard Evaluation

Potential chemical hazards are described by task number in Table 6-1. Hazard Evaluation Sheets for major known contaminants are attached at the end of this plan.

### 6.2.2 Chemical Hazard Control

An appropriate combination of engineering/administrative controls, work practices, and PPE shall be used to reduce and maintain employee exposures to a level at or below published exposure levels (see Section 6.2.1).

Applicable Engineering/Administrative Control Measures: None \_\_\_\_\_

PPE: See Section 7. \_\_\_\_\_

## CHEMICAL HAZARD EVALUATION

**Note: Use an asterisk (\*) to indicate known or suspected carcinogens.**

## 7. LEVEL OF PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT

### 7.1 LEVEL OF PROTECTION

The following levels of protection (LOPs) have been selected for each work task based on an evaluation of the potential or known hazards, the routes of potential hazard, and the performance specifications of the PPE. On-site monitoring results and other information obtained from on-site activities will be used to modify these LOPs and the PPE, as necessary, to ensure sufficient personnel protection. The authorized LOP and PPE shall only be changed with the approval of the regional safety coordinator or designee. Level A is not included below because Level A activities, which are performed infrequently, will require special planning and addenda to this SHASP.

Task Number	B	C	D	Modifications Allowed
1		(X)	X	

Note: Use "X" for initial levels of protection. Use "(X)" to indicate levels of protection that may be used as site conditions warrant.

Modifications: Will upgrade from Level D to Level C is organic vapors are present above background levels in the breathing zone

Regional Safety Coordinator

### 7.2 PERSONAL PROTECTIVE EQUIPMENT

The PPE selected for each task is indicated below. E & E's PPE program complies with 29 CFR 1910.120 and 29 CFR 1910 Subpart I and is described in detail in the CHSP. Refer to 29 CFR 1910 for the minimum PPE required for each LOP.

PPE	Task Number/LOP					
	1					
Full-face APR	(X)					
PAPR						
Cartridges:						
H						
GMC-H	(X)					
GMA-H						
Other:						
Positive-pressure, full-face SCBA						
Spare air tanks (Grade D air)						
Positive-pressure, full-face, supplied-air system						
Cascade system (Grade D air)						

PPE	Task Number/LOP					
	1					
Manifold system						
5-Minute escape mask						
Safety glasses	X					
Monogoggles						
Coveralls/clothing	X					
Protective clothing: _____						
Tyvek	(X)					
Saranex						
Other:						
Splash apron						
Inner gloves:						
Cotton						
Nitrile						
Latex	X					
Other:						
Outer gloves:						
Viton						
Rubber						
Neoprene						
Nitrile						
Other:						
Work gloves.	X					
Safety boots (as per ANSI Z41)	X					
Neoprene safety boots (as per ANSI Z41)						
Boot covers (type: _____)	X					
Hearing protection (type: _____)	X					
Hard hat	X					
Face shield						
Other:						

## 8. HEALTH AND SAFETY MONITORING

Health and safety monitoring will be conducted to ensure proper selection of engineering/administrative controls, work practices, and/or PPE so that employees are not exposed to hazardous substances at levels that exceed permissible exposure/dose limits or published exposure levels. Health and safety monitoring will be conducted using the instruments, frequency, and action levels described in Table 8-1. Health and safety monitoring instruments shall have been appropriately calibrated and/or performance-checked prior to use.

## 9. DECONTAMINATION PROCEDURES

All equipment, materials, and personnel will be evaluated for contamination upon leaving the exclusion area. Equipment and materials will be decontaminated and/or disposed and personnel will be decontaminated, as necessary. Decontamination will be performed in the contamination reduction area or any designated area such that the exposure of uncontaminated employees, equipment, and materials will be minimized. Specific procedures are described below

Equipment/Material Decontamination Procedures (specified by work plan): See Attachment 1.

\_\_\_\_\_

\_\_\_\_\_

Ventilation: All decontamination procedures will be conducted in a well-ventilated area.

Personnel Decontamination Procedures: Wash hands with soap and water before eating. Shower at the end of the day.

\_\_\_\_\_

\_\_\_\_\_

PPE Requirements for Personnel Performing Decontamination: Latex gloves will be worn when handling all equipment that has had contact with downhole equipment.

\_\_\_\_\_

\_\_\_\_\_

Personnel Decontamination in General: Following appropriate decontamination procedures, all field personnel will wash their hands and face with soap and potable water. Personnel should shower at the end of each work shift.

Disposition of Disposable PPE: Disposable PPE must be rendered unusable and disposed as indicated in the work plan.

\_\_\_\_\_

\_\_\_\_\_

Disposition of Decontamination Wastes (e.g., dry wastes, decontamination fluids, etc.): Decontamination fluids will be disposed of on site; dry wastes will be double-bagged and treated as non-hazardous waste.

\_\_\_\_\_

\_\_\_\_\_

Recommend good documentation in log book during freq. intervals or depth. *see*

Table 8-1

HEALTH AND SAFETY MONITORING

Instrument	Task Number	Contaminant(s)	Monitoring Location	Monitoring Frequency	Action Levels <sup>a</sup>	
■ PID (e.g., HNu IS-101) or ■ FID (e.g., OVA 128-GC)	1	Total VOCs	Breathing zone	continuous	<b>Unknown Vapors</b>  Background to 1 ppm: Level D 1 to 5 ppm above background: Level C 5 to 500 ppm above background: Level B >500 ppm above background: Level A	<b>Contaminant-Specific</b>
Oxygen Meter/Explosimeter	1				<b>Oxygen</b>  <19.5% or >25.0%: Evacuate area; eliminate ignition sources; reassess conditions. 19.5 to 25.0%: Continue work in accordance with action levels for other instruments.	<b>Explosivity</b>  ≤10% LEL: Continue work in accordance with action levels for other instruments; monitor continuously for combustible atmospheres. >10% LEL: Evacuate area; eliminate ignition sources; reassess conditions.
Radiation Alert Monitor (Rad-mini or RAM-4)	N/A				<0.1 mR/hr: Continue work in accordance with action levels for other instruments. ≥0.1 mR/hr: Evacuate area; reassess work plan and contact radiation safety specialist.	
Mini-Ram Particulate Monitor	N/A				<b>General/Unknown</b>  Evaluate health and safety measures when dust levels exceed 2.5 milligrams per cubic meter.	<b>Contaminant-Specific</b>
HCN/H <sub>2</sub> S (Monitox)	N/A				≥4 ppm: Leave area and consult with SSO.	
Draeger Colorimetric Tubes	N/A				<b>Tube</b>	<b>Action Level      Action</b>
Air Monitor/Sampler  Type: _____ Sampling medium: _____	N/A				<b>Action Level</b>	<b>Action</b>

Table 8-1

## HEALTH AND SAFETY MONITORING

Instrument	Task Number	Contaminant(s)	Monitoring Location	Monitoring Frequency	Action Levels <sup>a</sup>
Personal Sampling Pump Type: _____ Sampling medium: _____	N/A				<b>Action Level                      Action</b>
Micro R Meter	N/A				<2 mR/hr: Continue work in accordance with action levels for other instruments. 2 to 5 mR/hr: In conjunction with a radiation safety specialist, continue work and perform stay-time calculations to ensure compliance with dose limits and ALARA policy. >5 mR/hr: Evacuate area to reassess work plan and evaluate options to maintain personnel exposures ALARA and within dose limits.
Ion Chamber	N/A				See micro R meter action levels above.
Radiation Survey Ratemeter/Scaler with External Detector(s)	N/A				<b>Detector                      Action Level                      Action</b>
Noise Dosimeter (Sound Level Meter)	N/A				≤85 decibels as measured using the A-weighted network (dBA): Use hearing protection if exposure will be sustained throughout work shift. >85 dBA: Use hearing protection. >120 dBA: Leave area and consult with safety personnel
Other:	N/A				
Other:	N/A				

<sup>a</sup> Unless stated otherwise, airborne contaminant concentrations are measured as a time-weighted average in the worker's breathing zone. Acceptable concentrations for known airborne contaminants will be determined based on OSHA/NIOSH/ACGIH and/or NRC exposure limits.

## 10. EMERGENCY RESPONSE

This section contains additional information pertaining to on-site emergency response and does not duplicate pertinent emergency response information contained in earlier sections of this plan (e.g., site layout, monitoring equipment, etc.). Emergency response procedures will be rehearsed regularly, as applicable, during project activities.

### 10.1 EMERGENCY RESPONSIBILITIES

All Personnel: All personnel shall be alert to the possibility of an on-site emergency; report potential or actual emergency situations to the team leader and SSO, and notify appropriate emergency resources, as necessary.

Team Leader: The team leader will determine the emergency actions to be performed by E & E personnel and will direct these actions. The team leader also will ensure that applicable incidents are reported to appropriate E & E and client project personnel and government agencies.

SSO: The SSO will recommend health/safety and protective measures appropriate to the emergency.

Other:

### 10.2 LOCAL AND SITE RESOURCES (including phone numbers)

Ambulance: 911  
Hospital: Genesis Medical Center, 1401 West Central Park Avenue

Directions to Hospital (map attached at the end of this plan). North on Schmidt Road, then east on Rockingham Road, then north on Division Street, then east on West Central Park Avenue.

Poison Control:

Police Department: 911

Fire Department: 911

Client Contact: Scott Hayes, EPA, 913-551-7670

Site Contact: (b) (4)

On-Site Telephone Number: (b) (4)

Cellular Telephone Number: (b) (4)

Radios Available: No

Other: N/A

### 10.3 E & E EMERGENCY CONTACTS

In the event of a toxicological emergency, contact the E & E Response Center. The Response Center will contact the appropriate individuals.

E & E Emergency Response Center (24 Hours):

(b) (4)

Corporate Health and Safety Director, Dr. Paul Jonmaire:

Corporate Safety Officer, Tom Siener:

Dr. Raymond Harbison:

Regional Office Contact:

John A. Caoile  
Bob Overfelt  
Denny Cox

### 10.4 OTHER EMERGENCY RESPONSE PROCEDURES

On-Site Evacuation Signal/Alarm (must be audible and perceptible above ambient noise and light levels): 3 blast of horn

On-Site Assembly Area: At gate on northwest corner of property

Emergency Egress Route to Get Off Site: Gate from site on northwest or northeast corners

Off-Site Assembly Area: out-side gate

Preferred Means of Reporting Emergencies: report to project manager

Site Security and Control: In an emergency situation, personnel will attempt to secure the affected area and control site access.

N/A

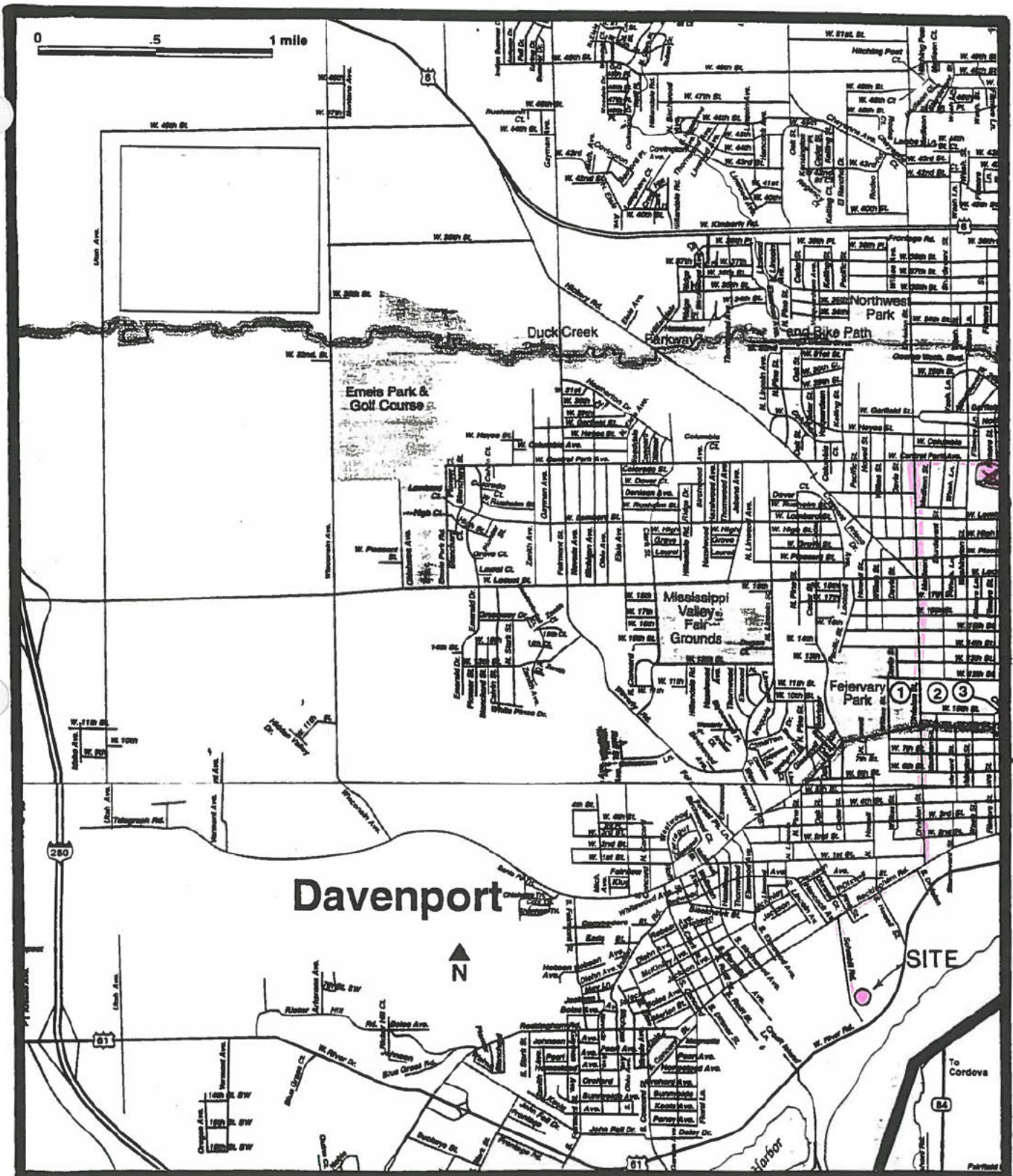
Emergency Decontamination Procedures: Flush with potable water

PPE: Personnel will don appropriate PPE when responding to an emergency situation. The SSO and Section 7 of this plan will provide guidance regarding appropriate PPE.

Emergency Equipment: Appropriate emergency equipment is listed in Attachment 1. Adequate supplies of this equipment shall be maintained in the support area or other approved work location.

Incident Reporting Procedures: Report to Denny Cox (Regional H&S Coordinator) or Bob Overfelt (START PM).

# SITE LOCATION MAP



R.V. Hopkins, Inc.  
743 Schmidt Road  
Davenport, Iowa

## **Attachment 1**

## **STATEMENT OF WORK**

Under the Superfund Technical Assessment and Response Team (START) contract with the United States Environmental Protection Agency (EPA), Ecology and Environment (E & E) has been tasked to abandon one (1) two-inch PVC monitoring well, which was installed as part of a site investigation of the adjoining R. V. Hopkins site in Davenport, Iowa (Figures 1 and 2). The abandonment procedures will be in accordance with requirements of the state of Iowa.

## **2.0 BACKGROUND**

The monitoring well (MW-4) was installed in June 1984 on the Midwest Metals, Inc. property as part of a 5-well ground water monitoring system for the R. V. Hopkins site, which is located on the adjoining property to the west. These properties are located in Davenport, Iowa, near the Mississippi River. The monitoring wells were installed during an EPA site investigation to determine if the ground water in the area had been impacted by wastes generated at this drum recycling site (R. V. Hopkins). A previous EPA inspection and limited sampling event at the R. V. Hopkins site indicated the potential for off-site migration of contaminants generated from on site waste disposal practices. MW-4 has an approximate depth of 15 feet, with a screened interval from 5 to 15 feet. The analytical results of sampling conducted in June 1984 revealed the presence of volatile organic compounds (VOCs) in the wells. In MW-4, chloroform and trans-1,2-dichloroethane were detected at concentrations of 15  $\mu\text{g/L}$  and 5.5  $\mu\text{g/L}$ , respectively. Because of apparent frost heave damage to MW-4, EPA has been asked to properly abandon the well.

### **3.0 SCOPE OF WORK**

The subcontractor is to furnish all materials, equipment and labor necessary for the abandonment of one (1) two-inch monitoring well in accordance with Iowa Department of Natural Resources (IDNR) regulations as found in 567-39.8(455B)(3) Abandoned Well Plugging Procedures Class 2 wells.

#### **3.1 WELL SEALING**

The subcontractor will backfill the well with "sealing materials", neat cement/bentonite grout, to four feet below the ground surface. Neat cement bentonite (94 lb. bag of Portland cement, 5% bentonite, and 6 gallons of clean water) grout will be placed using a tremie pipe. The tremie pipe will remain a minimum of two feet below the top of the pour at all times and be retracted slowly as the well is filled from the bottom to the top. Assume the well is 15 feet deep.

#### **3.2 WELLHEAD REMOVAL/RESTORATION**

The subcontractor will remove and dispose of the well protection materials (concrete well pads, protective casing, etc) and excavate soil to expose the casing to a depth of four feet below ground surface. The PVC casing pipe will be removed/cut to a depth of four feet below the ground surface and should be capped with a minimum of one foot of neat cement. The cap will extend six or more inches beyond the outside diameter of the remaining well casing and will terminate three feet below ground surface. **As an alternative, the subcontractor has the option of pulling out the entire well casing and screen and sealing the borehole prior the emplacement of the neat cement cap.**

The remaining three feet will then be backfilled with native soil and graded so that surface water is directed away from the abandoned well location. Grass sod, if necessary to conform to the surrounding landscape, will be placed over the area and watered. Restoration will be complete when conducted to the satisfaction and approved by the E & E project manager.



HDR Engineering, Inc.

## Site Plan

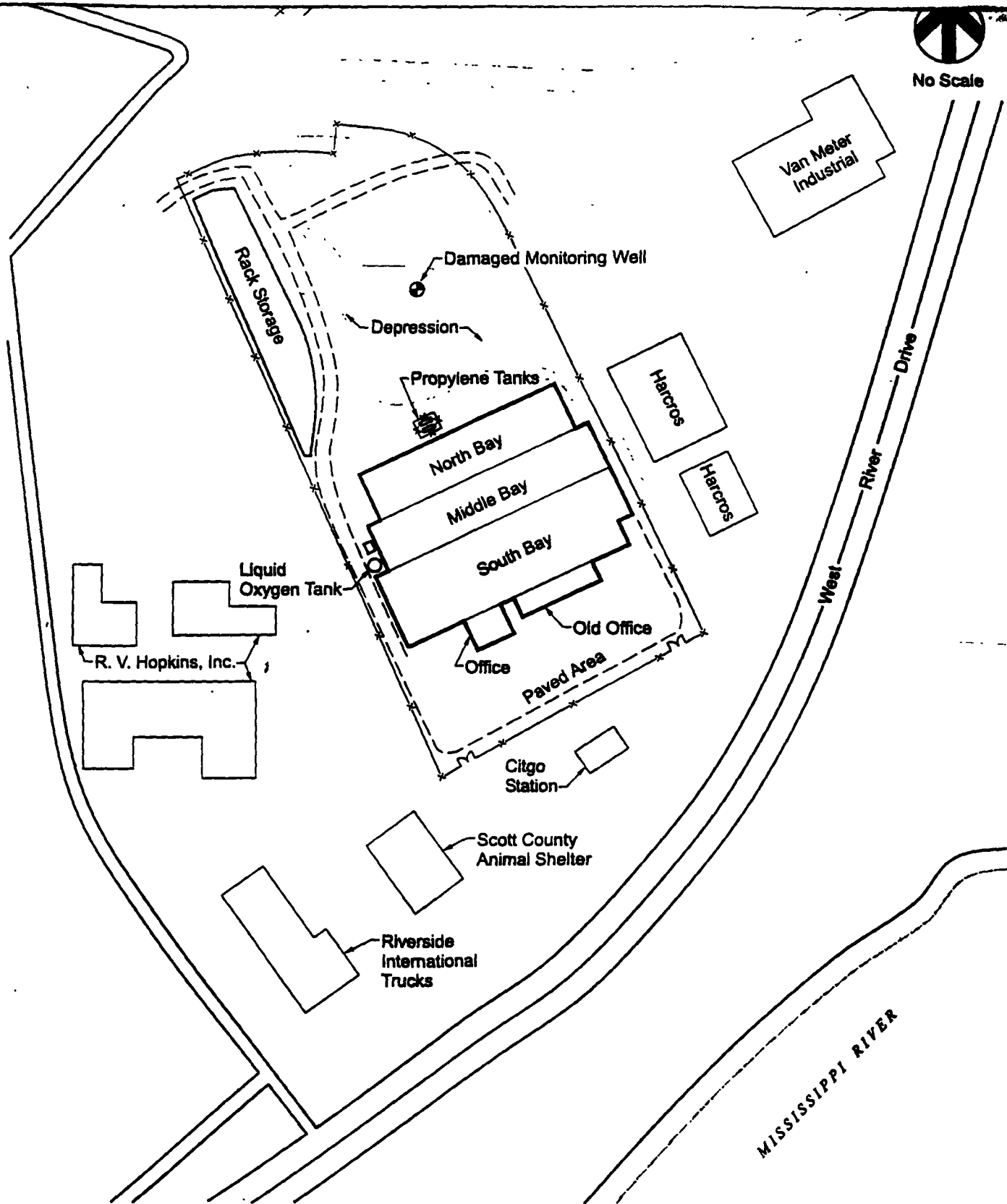
MIDWEST  
METALS,  
INC.

Midwest Metals, Inc.  
Davenport, Iowa Facility

Date

Figure

2



Pictures from RV Hopkins  
Well Abandonment

8/13/99

9902-009, 1166RVSEFX

Gene Pierce  
Midwest Net, Inc  
PO B 4050  
Davenport, IA 52803



99 8 12

Date: 8/13/99 Roll/Frame: 1/1  
Time: 0945 Dir: ~~N~~NE  
well prior to abandonment.



99 8 12

Date: 8/13/99 Roll/Frame: 1/2  
Time: 1000 Dir: S  
Rig set up over well to be  
abandoned.



Date: 8/13/99 Roll/Frame: 1/3  
Time: 1005 Dir: S  
Drillers pulling well casing,  
protector, and pad.



99 8 12

Date: 8/13/99 Roll/Frame: 1/4

Time: 1010 Dir: S

Drillers pulling well + screen.



Date: 8/13/99 Roll/Frame: 1/5  
Time: 1205 Dir: S  
Area where well was  
located.



# ecology and environment, inc.

International Specialists in the Environment

Job Number KJ7104

RV Hopkins

Well Abandonment

Aug 12

IDD: 807-9962-009

PAN: 1166 RVSFX

**MIDWEST**

**METALS**

**INC.**

**Lyle Barngrover**

**Director of Quality and Safety**

**P.O. Box 4050**

**Davenport, IA, 52808**

**(319) 324-5244, FAX (319) 328-5372**

**Toll Free 1-800-747-5244**

**lbarngrover@midwestmetalsinc.net**

E & E Job Number KJ7104

Telephone Code Number \_\_\_\_\_

Site Name RV Hopkins

City/State DAVENPORT, IA

TDD 807-9902-009

PAN 1166RV8FXV

SSID \_\_\_\_\_

Start/Finish Date Aug 12, 1999

Book 1 of 1

E & E Emergenc  
E & E Corporate  
MEDTOX Hotline  
E & E Safety Dir

(b)(6)

8/12/99

1166 RVSEFX

E+E START has been tasked to abandon One two-inch PVC monitoring well, which was installed as part of a site investigation of the adjoining RV Hopkins site in Davenport, Iowa. START TEAM MEMBER (STM) JEFF GADT HAS BEEN ASSIGNED AS PROJECT MANAGER. EPA OSC IS SCOTT HAYES. STMs PATTY CURRIER AND TRACY BRAIG WILL BE CONDUCTING OVERSIGHT OF THE WELL ABANDONMENT. AQUADRILL OUT OF CORALVILLE, IA WILL BE CONDUCTING THE WELL ABANDONMENT. WITH WILL OCCUR ON AUG 13, 1999. 1200 STMS CURRIER AND BRAIG DEPART THE OFFICE FOR THE GARAGE. 1240 AFTER LOADING EQUIPMENT STMS DEPART GARAGE FOR SITE. 1900 STMS ARRIVE AT MOTEL. THE SITE WAS LOCATED PRIOR TO ARRIVAL AT THE MOTEL. HOURS FOR 8/12/99: CURRIER = 7 hrs, BRAIG = 7 hrs.

Patty Currier  
8/12/99

1166RVSEXY

8/13/99

0825 STMs depart Motel for site.  
 0855 STMs Arrive on-site AND  
 GO INTO MIDWEST METALS OFFICE  
 TO CHECK IN WITH GENE PIERCE.  
 Mr. Pierce is not in yet. STMs  
 CONDUCT HEALTH AND SAFETY  
 MEETING. SEE DAILY HEALTH AND  
 SAFETY RECORDS FOR DETAILS.  
 0925 MEET WITH GENE PIERCE OF  
 MIDWEST METALS. SPOKE WITH  
 LANDLORD OVER PHONE TO DESCRIBE  
 ABANDONMENT ACTIVITIES.  
 0945 OPEN WELL TO BE ABANDONED  
 MONITORED, WHEN WELL WAS  
 OPENED, WITH HNU. READING  
 WAS BACKGROUND AT WELL HEAD.  
 STMs collected STATIC WATER LEVEL  
 READING 7.3' <sup>TOC</sup> <sub>pc 8/13</sub>, TOTAL DEPTH  
 WAS 11.9' <sub>pc 8/13</sub> <sup>TOC</sup>.  
 0950 CONDUCT HEALTH AND SAFETY  
 MEETING WITH DRILLERS. SEE DAILY  
 HEALTH AND SAFETY MEETING RECORDS  
 FOR ATTENDEES. <sup>NOTE = PC 8/13</sup> GENE PIERCE SHOWED  
 STMs AND DRILLERS EMERGENCY  
 ROUTE OFF SITE.

 / Paty Currier  
 8/13/99

8/13/99

11166 RVSEXX

1000 SET UP RIG OVER WELL. See Photodocumentation record page 15.

1015 BEGIN PULLING WELL COVER, PAD, AND WELL CASING. REMOVED ENTIRE LENGTH OF CASING.

1020 FILTER PACK IN BOREHOLE UP TO 5' BGS. WILL ATTEMPT TO WASH OUT FILTER PACK BY FORCING TREMIE PIPE INTO SAND ONCE PRESSURIZED WATER <sup>PC 8/13/99</sup> GROUT IS INTRODUCED INTO BOREHOLE.

1050 DRILLERS GO GET MORE WATER. THEY USED MORE WATER TO WASH OUT FILTER PACK THAN HAD ANTICIPATED. NOTE: KILL SWITCHES WERE TESTED PRIOR TO BEGINNING ABANDONMENT. THERE ARE TWO KILL SWITCHES ON THE ATV RIG. THE KILL SWITCH LOCATED ON THE LEFT SIDE OF THE RIG DOES NOT WORK; HOWEVER, THE KILL SWITCH LOCATED ON THE RIGHT SIDE IS IN OPERATING ORDER.

1115 DRILLERS RETURN WITH WATER. BEGIN MIXING GROUT.

Patty Currier  
8/13/99

8/13/99

116ARV5EXX

1125 Mixed about 20 gallons of grout and tremie down into borehole. Need more grout to fill borehole.

1130 Begin mixing more grout and tremie. 10 more gallons into borehole. Grout is at ground surface. Tremie pipe was at 14' BGS during grouting.

1135 Finish grouting begin pulling tremie pipe. Put Auger into rig to Auger down to 4' BGS.

1150 FINISH PILING PORTLAND CEMENT AND TOPSOIL INTO AUGERED OUT BOREHOLE. PUT <sup>PC 8/13/99</sup> TOP SOIL ONTO TOPSOIL.

1155 Begin decoring tremie pipe and auger used during abandonment. Also decoring back of rig.

1225 FINISH DECORING. LOAD UP WELL CASING, PAD, BATTLERS, AND WELL PROTECTOR. AQUADRILL WILL DISPOSE OF THESE MATERIALS.

Patty Cuthin  
8/13/99

08/13/99

1166 RVS/RY

1230 LOAD ATV RIG ONTO  
TRUCK. Reconcile Cost/price  
Sheet.

1245 DRILLERS DEPART SITE  
STMs Let Gene Pierce  
know we were finished.  
He made a copy of  
the scope of work  
for the landlord.

1300 STMs depart site.

1330-1400 Lunch break

1400-1445 DRIVE TO

IOWA CITY

1445-1515 STOP IN IOWA

CITY FOR WELL LOGS FROM  
GEOLOGICAL SURVEY (FOR S.  
4<sup>th</sup> St site)

1515 Resume driving.

2000 Arrive at E+E GARAGE

UNLOAD EQUIPMENT

2030 ARRIVE AT OFFICE

HOURS FOR 8/13/99:

BRAIG = 10.5, CURRIER = 10.5

FOR RV HOPKINS. 1 hour each

for S. 4<sup>th</sup> St. *Patty Currier*  
8/13/99

(b) (4)

Patty Curran  
8/13/99

# Photodocumentation Record

11606 RVSEX

8/13/99

CAMERA: RICOH XF-30D

EPA ID: 725743

FILM: FUJI 200 speed

DATE	TIME	DIR	SUBJECT /	Roll # FRAME #	PHOTOGRAPH RADIER
8/13/99	0945	NNE	WELL PRIOR TO ABANDONMENT	1/1	BRAIG
"	1000	S	RIG SETUP OVER WELL	1/2	CURRIER
"	1005	S	Pulling well casing	1/3	"
"	1010	S	Pulling well & screen	1/4	"
"	1205	S	WHERE AREA WHERE WELL WAS LOCATED	1/5	"

Patty Currier  
8/13/99

**ecology and environment, inc.**

## SITE-SPECIFIC HEALTH AND SAFETY PLAN ACCEPTANCE

Project: RV Hooking Well Site- well abandonment

Project No.: K57104

TDD/PAN No.: 307-9902-009/1166 RUSFX

Project Location: Davenport IA

Project Manager: Jeff Gadt

Project Director: Bob Overfelt

**The undersigned acknowledge that they have read and understood and agree to abide by the health and safety plan.**

[illegible]

ecology and environment, inc.

**DAILY SAFETY MEETING RECORD**

**GENERAL INFORMATION**

Project: BV Hopkins Well Site - well abandonment

Project No: K17104

TDD/PAN No.: 307-9902-009/1166 RUSFXX

Project Location: Davenport, Iowa

Date: 8/13/99

Time: 9:00am

Weather: overcast, ~75°

Specific Location: Midwest Metals parking lot

Planned Activities: well abandonment

**SAFETY TOPICS PRESENTED**

Chemical Hazards Update:

Physical Hazards Update: slip, trip, fall, watch overhead & rig

Radiation Hazards Update: NA

Review of Previous Monitoring Results: NA

Protective Clothing/Equipment Modifications: NA

Special Equipment/Procedures: NA

Drilling Safety Issues (including testing the operation of drill rig emergency stop switches): will check kill switch prior to abandonment

Emergency Procedures: 3 horn blasts on vehicle horn

Additional Topics/Observations:

Team Members' Comments/Suggestions:

# DAILY SAFETY MEETING RECORD

## INITIAL PROJECT SAFETY CHECKLIST

1. Emergency information reviewed? ☒ and made familiar to all team members? ☒
2. Route to nearest hospital driven? ☒ and its location known to all team members? ☒
3. Health and safety plan readily available and its location known to all team members? ☒
4. E & E Drilling SOP on site? ☒ and available for team member review? ☒

## ATTENDEES

Meeting shall be attended by all personnel who will be working within the exclusion area. Daily informal update meetings will be held prior to work and when site tasks and/or conditions change.

Name (Printed)	Name (Signature)	Date	Representing (Company/Agency)
PATTY CURRIER	Patty Currier	8/13/99	E+E
STEVE WILSON	Steve Wilson	8/13/99	AQUADRILL
Chad Crahtree	Chad Crahtree	8-13-99	Aquadrill
Meeting Conducted By: Tracy Braig	Tracy Braig	8/13/99	E+E (BRAL)/START



# ecology and environment, inc.

International Specialists in the Environment

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## BUFFALO CORPORATE CENTER

368 Pleasant View Drive, Lancaster, New York 14086  
Tel: 716/684-8060, Fax: 716/684-0844

July 14, 1999

Aquadrill, Inc.  
717 East Second Avenue  
Coralville, Iowa 52241

ATTN: Diane Joslyn

**RE: TDD No. S07-9905-017**  
**PAN: 1264RVTZXX**

Dear Ms. Joslyn:

Enclosed for your file is one fully executed copy of the above referenced Subcontract Agreement.

Should you have any questions regarding this Agreement, please don't hesitate to call me at (716) 684-8060.

Sincerely,

Edward J. Pfeiffer  
START Region VII  
Contract Financial Manager

EJP/ss  
Enclosure

cc: J. Gadt - E& E Kansas  
File

SUBCONTRACT AGREEMENT  
DRILLING SERVICES  
ECOLOGY AND ENVIRONMENT, INC.

AND  
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM (START)

AND  
AQUADRILL, INC  
TDD NO. 1264RVTZXX  
PAN S07-9905-017

AGREEMENT, entered into and made effective as of the 14<sup>th</sup> day of July, 1997  
by and between ECOLOGY AND ENVIRONMENT, INC., a New York corporation, with  
headquarters at 368 Pleasant View Drive, Lancaster, New York 14086 (hereafter, "E & E"),  
Superfund Technical Assessment and Response Team (START), and , AQUADRILL, INC, with  
offices at 717 East Second Avenue, Coralville, Iowa 52241 (hereafter, the "Subcontractor").

W I T N E S S E T H:

WHEREAS, Ecology and Environment, Inc., with headquarters at 368 Pleasant View,  
Lancaster, New York 14086, and a business office at 6405 Metcalf Avenue, Cloverleaf Building  
3, Suite 404, Overland Park, Kansas, 66202, has entered into a contract (Contract No. 68-W6-  
0012) with the United States Environmental Protection Agency (EPA), with an effective date of  
December 18, 1995, to furnish technical, engineering and managerial services in support of  
EPA's Emergency Response, Removal, and Prevention Programs within EPA Region VII; and

WHEREAS, E & E, desires to subcontract a portion of its work to the Subcontractor;  
and

WHEREAS, the Subcontractor agrees to provide such subcontract services in  
accordance with the terms stated herein.

NOW, THEREFORE, in consideration of the mutual covenants, premises, conditions  
and terms to be kept and performed, the parties hereto agree as follows:

GENERAL TERMS

1. EMPLOYMENT

E & E hereby agrees to engage the Subcontractor, and the Subcontractor hereby agrees to perform the services as provided for herein, and as set forth in Exhibit 1, annexed hereto and made a part hereof, in connection with the program.

2. SCOPE OF WORK

The services to be provided by the Subcontractor for and on behalf of E & E shall be those specified in Exhibit 1, annexed hereto and made a part hereof. All services are for the purpose of supporting and assisting E & E in furnishing technical and managerial services to the EPA under the Contract. The Subcontractor shall furnish the necessary personnel, material, and service facilities (except as may be otherwise specified herein), and shall otherwise do all things necessary for or incident to the performance of the work specified in Exhibit 1, and any references contained therein.

3. CONTRACT DOCUMENTS AND ORDER OF PREFERENCE

A. This agreement consists of the following documents:

- (1) This Subcontract Agreement dated as of the effective date written above, with attached Exhibits.
- (2) The additional general provisions required by the prime Contract, which are hereby incorporated by reference as follows:

<u>FAR Clause Number</u>	<u>Clause Title and Application</u>
52.202-1	DEFINITIONS
52.203-1	OFFICIALS NOT TO BENEFIT
52.203-3	GRATUITIES
52.203-5	COVENANT AGAINST CONTINGENT FEES
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT
52.203-7 52.209-6	ANTI-KICKBACK PROCEDURES (If over \$100,000) PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED OR PROPOSED FOR DEBARMENT

<u>FAR Clause Number</u>	<u>Clause Title and Application</u>
52.215-1	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (Negotiated Contracts over \$10,000)
52.215-2	AUDIT -- NEGOTIATION (Negotiated Contracts over \$25,000)
52.215-22	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (Negotiated Contracts over \$25,000)
52.215-24	SUBCONTRACTOR COST OR PRICING DATA (Negotiated Contracts over \$100,000)
52.215-26	INTEGRITY OF UNIT PRICES (If over \$25,000)
52.215-27	TERMINATION OF DEFINED BENEFIT PENSION PLANS
52.215-33	ORDER OF PRECEDENCE
52.215-39	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS
52.215-40	NOTIFICATION OF OWNERSHIP CHANGE
52.216-7	ALLOWABLE COST AND PAYMENT (If over \$25,000)
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS
52.219-9	SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN
52.219-13	UTILIZATION OF WOMEN OWNED SMALL BUSINESSES
52.219-16	LIQUIDATED DAMAGES - SMALL BUSINESS SUBCONTRACTING PLAN
52.220-3	UTILIZATION OF LABOR SURPLUS AREA CONCERNS
52.222-3	CONVICT LABOR
52.221-21	CERTIFICATION OF NONSEGREGATED FACILITIES
52.222-22	PREVIOUS CONTRACTS AND COMPLIANCE REPORTS
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.222-26	EQUAL OPPORTUNITY

<b>FAR Clause Number</b>	<b>Clause Title and Application</b>
52.222-35	AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS (If over \$10,000)
52.222-36	AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (If over \$2,500)
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA
52.223-2	CLEAN AIR AND WATER (If over \$100,000)
52.223-3	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA
52.223-6	DRUG-FREE WORKPLACE
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	AUTHORIZATION AND CONSENT
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
52.227-17	RIGHTS IN DATA - SPECIAL WORKS
52.230-2	COST ACCOUNTING STANDARDS (Negotiated Contracts over \$100,000)
52.230-3	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES
52.230-5	ADMINISTRATION OF COST ACCOUNTING STANDARDS
52.242-13	BANKRUPTCY
52.243-3	CHANGES - TIME AND MATERIALS
52.244-3	SUBCONTRACTS
52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME AND MATERIAL, OR LABOR-HOUR CONTRACTS).
52.246-6	INSPECTION
52.246-25	LIMITATION OF LIABILITY--SERVICES (If over \$25,000)
52.249-6	TERMINATION
52.249-14	EXCUSABLE DELAYS

EPAAR Clause Number	Clause Title
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1552.235-70	SCREENING OF BUSINESS INFORMATION FOR CLAIMS OF CONFIDENTIALITY
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1552.235-71	TREATMENT OF CONFIDENTIAL BUSINESS INFORMATION
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- (3) Any special E & E "Terms and Conditions", to the extent such Terms are applicable, are identified as such, and are attached hereto.

B. In the general provisions listed above all references to the Contractor or E & E shall be deemed references to the subcontractor, and all references to the EPA or the Government shall be deemed reference to E & E.

C. In the event of any inconsistency in this Subcontract, the inconsistencies shall be resolved by giving precedence in the following order:

- (1) This Subcontract Agreement with attached Exhibits
- (2) The Additional provisions, approved protocols and procedures incorporated into this Subcontract by reference
- (3) The General Provisions of the Contract

4. PERIOD OF PERFORMANCE

The period of performance of this Subcontract shall be for a term of \_\_\_\_\_.

5. ESTIMATED COST

(b) (4)

6. PAYMENT FOR SERVICES

(b) (4)

(b) (4)

7. SUBCONTRACTOR ACCOUNTING SYSTEM

(b) (4)

8. SUBMISSION OF CLAIMS FOR REIMBURSEMENT

(b) (4)

(b) (4)

9. TECHNICAL DIRECTION

The Subcontractor shall promptly perform all work directed by the E & E Region VII START Program Manager or his designated representative (Robert C. Overfelt/Project Manager) in accordance with the technical direction given by them which may include, but need not be limited to:

- (1) the anticipated level of effort to be devoted to each task;
- (2) the anticipated end product(s) of each task; and
- (3) the completion date for each task.

10. E & E START FINANCIAL MANAGER MODIFICATION OF SUBCONTRACT

Notwithstanding any of the provisions of this Subcontract, only the Region VII START Financial Manager is authorized to alter the scope of work set forth in Exhibit 1 of this Subcontract, or to amend or modify in any way any of the terms of the Subcontract.

11. AMENDMENTS IN WRITING

This Subcontract may be amended only by a further written agreement, duly executed, between the parties, and such amendment shall be subject to the prior approval of the Government. This Subcontract may not be changed orally.

12. NOTIFICATION OF CHANGES TO SUBCONTRACT

A. Definitions.

As used in this Article, the term "E & E START Financial Manager" does not include any representative of the E & E START Financial Manager, whether or not such representative is acting within the scope of his authority.

B. Notice.

The primary purpose of this Article is to obtain prompt reporting by the Subcontractor Contractor conduct which the Subcontractor considers to constitute a change to this Subcontract. Except for changes identified as such, the Subcontractor shall notify the E & E START Financial Manager promptly in writing, and in any event within ten (10) calendar days from the date the Subcontractor so identifies any Contractor conduct (including actions, inactions, and written or oral communications or changes in site conditions) that the Subcontractor regards as a change to the Subcontract terms and conditions. The notice shall state, on the basis of the most accurate information available to the Subcontractor, the following:

- (1) the date, nature and circumstance of the conduct regarded as a change;
- (2) the name, function, and activity of each individual, Contractor, and Subcontractor official or employee, involved in or knowledgeable of such conduct;
- (3) the identification of any document(s) and the substance of any oral communication involved in such conduct; and
- (4) the particular elements of contract performance for which the Subcontractor may seek an equitable adjustment under the "Changes" clause, including:

- (a) those portions of the Subcontract statement of work the Subcontractor believes will be affected by the alleged change;
- (b) the estimated adjustment to the Subcontract with respect to estimated cost and/or fixed fee, delivery or performance schedule; and other provisions affected by the alleged change.

C. Continued Performance

The Subcontractor shall not proceed with the alleged changes as identified in the notice required by B. above, unless notified in advance in writing by the E & E Region VII START Financial Manager, in accordance with D (1), below. Until such notification is received, the Subcontractor shall continue performance of this Subcontract in accordance with its terms and conditions.

D. E & E Response

The E & E Region VII START Financial Manager shall respond in writing to the notice required by B. above. In such response, the E & E START Financial Manager shall either:

- (1) confirm that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance in accordance with the "Changes" clause;
- (2) countermand any communication regarded as a change;
- (3) deny that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance; or
- (4) in the event the Subcontractor's notice information is deemed inadequate to enable the making of a response as set forth in (1), (2) or (3) above, advise the Subcontractor when additional information is required and establish the date by which such additional information is to be furnished.

E. Equitable Adjustments

If the E & E VII START Financial Manager confirms that E & E or Government conduct effected a change within the scope of the "Changes" clause, as alleged by the Subcontractor, and such conduct causes an increase or decrease in the estimated cost of, or the time required for the performance of, any part of the work under this Subcontract, whether changed or not changed by such conduct, an equitable adjustment may be made in accordance with the "Changes" clause of this Subcontract.

13. NOTICES

All notices and other communications required to be given under this Subcontract, and in the absence of specific direction otherwise, shall be deemed effectively made or given if written

and delivered to the appropriate party at the address listed below, or at such other address or addresses as either party may, from time to time designate in writing:

With respect to E & E:

Ecology and Environment, Inc.  
6405 Metcalf Avenue  
Cloverleaf Building 3, Suite 404  
Overland Park, Kansas 66202  
Attention: Robert C. Overfelt, START Program Manager

With respect to the Subcontractor:

Aquadrill, Inc.  
717 East Second Avenue  
Coralville, Iowa 52241  
Attention: Diane Joslyn

#### 14. COMPLIANCE WITH LAWS

Subcontractor shall comply with all applicable state, federal, and local laws and executive orders and regulations in the performance of its services hereunder.

#### 15. HEALTH AND SAFETY

##### A. General

Subcontractor acknowledges that it has a primary duty to prevent on the job accidents and to protect the health and safety of its employees. Subcontractor understands and acknowledges that this Subcontract will entail work at sites that pose potential exposure to hazardous materials and that such work is inherently dangerous. Subcontractor also understands that accidents, bodily injury, or property damage could result from human errors in judgement, mistakes, carelessness, forgetfulness, sloppiness, and work performed in haste. It is the duty and responsibility of the Subcontractor to train and supervise all its personnel and activities to prevent such occurrences. Subcontractor represents that it has the requisite corporate resources and expertise to perform the services hereunder.

##### B. Requirements

At a minimum, Subcontractor shall in all cases strictly comply with all relevant or applicable Federal, State, and local legal regulatory requirements, guidelines, and generally accepted procedures and standards of practices governing the physical and chemical hazards associated with the provision of said services, including the appropriate requirements set forth in 29 CFR Parts 1910 and 1926, including in particular, the provisions of 29 CFR 1910.120;

1910.132; 1910.133; and 1910.134. Subcontractor will also comply with any special requirements necessary to accommodate specific site conditions.

**C. Site Health and Safety Plans**

Subcontractor shall determine the necessary methods and means to accomplish the purposes of this Agreement and take all necessary measures to ensure that said purposes are achieved safely under its direction. Subcontractor agrees to submit to E & E its health and safety plan relating to site activities prior to commencement of work. Subcontractor further acknowledges that E & E bears no duty or legal responsibility to supervise Subcontractor personnel. Any advice or direction provided by E & E or the client shall not relieve Subcontractor or any of its employees of any obligations hereunder, unless such advice and direction is provided in writing to the Subcontractor, in accordance with paragraph 13 hereunder.

**D. Procedures**

Subcontractor agrees at a minimum to abide by all EPA safety and health programs and procedures while performing any on-site services in connection with this Agreement. Subcontractor further agrees to adhere to its Health and Safety Plan for site activities and understands and agrees that failure to do so may result in the shutdown of Subcontractor activities by E & E or the EPA and concurrently, the assumption by Subcontractor of legal responsibility for additional costs and damages pursuant to paragraph 33 of this Agreement. The Subcontractor further agrees to require any of its employees who are engaged in field work hereunder to submit to physical examinations and/or to comply with any health and/or medical program for preventative or remedial or other purposes, if and when required by the EPA.

**E. Medical Surveillance Program**

Each Subcontractor employee involved in field activities under this agreement should be enrolled in a medical surveillance program. The Subcontractor acknowledges that it is its sole responsibility to institute a medical surveillance program as required by 29 CFR 1910, including but not limited to 29 CFR 1910.120(f), and that the instituting of any such program shall be solely at its own expense. The Subcontractor agrees to submit to E & E a certification that each employee assigned to field operations on this project, is enrolled in a medical surveillance program, and has been medically certified by a physician for this work, including the use of a respirator. Certifications of employee medical status must be submitted to E & E before any employee shall be permitted to enter a hazardous waste site under this agreement. (See Medical Cert Form [H & S Training Cert Form.]

F. Hazardous Waste Operations Training Program

The Subcontractor shall arrange for and require that all of its employees who will be working on a hazardous waste site take a safety and health training course with annual refreshers which conform to the requirements specified in OSHA Regulations 29 CFR 1910.120(e). Certification of completion of such courses by each employee who is to work on site under this agreement shall be furnished to Ecology and Environment, Inc. prior to any such employee's entering the site for any purpose.

G. First Aid Training and CPR Training

The Subcontractor agrees that its employees will not enter any site under this agreement, unless a minimum of two field personnel are present on the site that are currently certified by the American Red Cross in both Multimedia First Aid and Cardiopulmonary Resuscitation (CPR)-Modular, or equivalent. These trained individuals need not be subcontractor employees.

H. Use of Equipment and Protective Clothing at Hazardous Waste Sites

The Subcontractor agrees that each employee shall wear such protective clothing and use such equipment as specified in the site Health and Safety Plan at all times when such employee is on the site. The Subcontractor hereby agrees to comply with the requirements set forth at 29 CFR 1910.134 including those provisions that require facial hair to be removed and/or special facepiece lenses to be utilized by persons with poor eyesight in the event respiratory equipment is to be used.

16. EQUAL EMPLOYMENT OPPORTUNITY

The provisions of the clause contained in FAR Subpart 22.8 in effect on the date hereof are hereby incorporated herein by reference with the following change: The word "Contractor" shall mean "Subcontractor."

17. PROHIBITION AGAINST ASSIGNMENT -- SUBCONTRACTING

It is understood and agreed that the Subcontractor shall be an independent contractor and that the Subcontractor shall not further subcontract out any of the work to be performed by it under this subcontract nor assign said Subcontract without, in each case, the prior written consent of E & E and of the Government, if appropriate.

18. INCREMENTAL FUNDING

(b) (4)

(b) (4)

19. CONSULTANT SERVICE

The Subcontractor agrees to determine and notify E & E whether or not it or any consultant to be utilized by it under this Subcontract has in effect an agreement with the Federal Government for similar services, and if so, will advise the E & E START Financial Manager accordingly.

20. FUTURE EXPERT CONSULTING SERVICES

It is recognized that, subsequent to performance under this subcontract, the need may arise to provide expert testimony during hearings, and/or court proceedings involving site specific activities or other matters, with regard to which personnel provided by the subcontractor under this contract would have gained expertise as a result of tasks performed under this contract. Therefore, the subcontractor agrees to make available expert consulting services in support of such future proceedings, and to enter into intent agreements as necessary with lower tier subcontractors (if any) to ensure the availability of such subcontractor personnel. Agreement to provide such services in the future serves as a notice of intent only. Such services are not purchased hereby, and will be obtained, as required, through a separate contractual agreement.

21. DESIGNATION OF PATENT ADVISOR

The E & E START Financial Manager is hereby designated to represent E & E in administering the "Patents and Inventions" clause in this Subcontract. Correspondence with respect to this clause should be directed to the E & E START Financial Manager. The requirements of the "Patents and Inventions" clause regarding the identification and mailing address of the E & E START Financial Manager in this Subcontract may be satisfied by including this entire paragraph.

22. FEDERAL REPORTS ACT

In the event that it subsequently becomes a requirement of this Subcontract to collect identical information from ten (10) or more public respondents, the Federal Reports Act, 44 USC 3501, et seq., shall apply to this Subcontract. In such event, the Subcontractor shall not expend any funds to, or take any other action whatsoever, to solicit information from any of the public

respondents until the EPA Contracting Officer has notified E & E in writing that the required Office of Management and Finance final clearance has been obtained, and E & E has so notified the Subcontractor. The Subcontractor shall provide to the EPA Contracting Officer, and the E & E START Financial Manager, such information as will facilitate obtaining such clearance.

23. SUBCONTRACT CONSENT

This Subcontract, and all amendments thereto, are subject to the prior approval of the EPA Contracting Officer, as provided for in the clause of the General Provisions entitled, "Subcontracts".

24. ORGANIZATIONAL CONFLICT OF INTEREST

A. The Subcontractor warrants that, to the best of its knowledge and belief, and except as otherwise set forth in this Subcontract, it does not have any organizational conflict of interest as defined in Paragraph B, below.

B. The term "Organizational Conflict of Interest" means a relationship exists whereby the Subcontractor (including its chief executives, directors, and proposed consultants) has interests which:

- (1) May diminish its capacity to give impartial, technically sound, and objective advice and assistance, or may otherwise result in a biased work product; or
- (2) May result in an unfair competitive advantage. Such interests include, but are not limited to, present or proposed contractual arrangements with an industry to be studied, present or proposed contractual agreements with a firm which manufactures or sells any substance or item to be studied, present or proposed manufacture or sale of any substance or item to be studied, and present or proposed manufacture or sale of any substance or item in competition with a substance or item to be studied under the proposed Subcontract. It is not relevant that the Subcontractor has either the reputation of being able to resist the temptation to give biased advice or the ability to resist such temptation.

C. The Subcontractor agrees that, if after the effective date of this Subcontract, it discovers an organizational conflict of interest with respect to this Subcontract, it shall make an immediate and full disclosure in writing to the E & E START Financial Manager, which disclosure shall include a description of the action which the Subcontractor has taken, or proposes to take, to avoid, eliminate or neutralize the conflict. E & E may, however, terminate this Subcontract for its convenience in the event of any organizational conflict of interest.

D. The Subcontractor agrees further that if a conflict of interest were identified prior to

the execution of this Subcontract, it will adequately avoid, eliminate or neutralize the conflict in a manner satisfactory to the E & E Region VII START Financial Manager.

E. In the event the Subcontractor was aware of an organizational conflict of interest any time prior to or after the execution to this Subcontract, and intentionally did not disclose the conflict to E & E, E & E may terminate the Subcontract for default, and E & E and/or the Government may invoke such other remedies as may be authorized by law.

## **25. CONFLICTS OF INTEREST REGARDING PERSONNEL**

In addition to the requirements of Paragraph 24 Organizational Conflict of Interest, the following provision with regards to employee personnel performing under this subcontract shall apply.

The subcontractor agrees to immediately notify E & E's START Financial Manager of any actual, apparent, or potential personal conflicts of interest with regards to any subcontractor employee, or consultant working on or having access to information regarding this subcontract. A personal conflict of interest is defined as a relationship of an employee, or consultant with an entity that may impair the objectivity of the employee or consultant in performing the subcontract work. The subcontractor agrees to notify E & E's START Financial Manager prior to incurring costs for that employee's work where an employee may have a personal conflict of interest. In the event that the personal conflict of interest does not become known until after performance of the subcontract has begun, the Subcontractor shall immediately notify E & E START Financial Manager of the personal conflict of interest. The Subcontractor shall continue performance of this contract until notified by E & E's START Financial Manager of the appropriate action to be taken.

This paragraph shall apply to any subcontract or consultant agreement placed hereunder, except for subcontracts or consultant agreements for such services as well drilling, fence erecting, plumbing, utility hookups, security, electrical, or other similar services.

## **26. PROJECT EMPLOYEE CONFIDENTIALITY AGREEMENT**

The subcontractor agrees to obtain confidentiality agreements from all personnel working on requirements under this contract. Such agreements shall contain provisions which stipulate that each individual agrees not to disclose either in whole or in part to any entity external to EPA, DOJ, or the contractor, any technical data provided by the Government or generated by the contractor, any site specific cost information, or any enforcement strategy without first obtaining

the written permission of E & E. Such agreements shall be effective for the period of performance of E & E's prime contract and for a period of two years after the expiration of this contract, including any amendments to extend the term of this contract.

**27. INSPECTION AND ACCEPTANCE**

The E & E START Financial Manager, or his duly authorized or designated representative, is authorized to perform inspection for acceptance and to accept materials and services to be provided.

**28. F.O.B. POINT**

All items and materials required hereunder shall be delivered F.O.B. Destination (e.g., Job Site), with all shipping and transportation costs prepaid.

**29. TOOLS AND MATERIALS**

Tools and materials necessary for Subcontractor's performance shall be supplied by Subcontractor. Any tools or materials supplied by E & E, or created from performance of the Agreement, shall remain the property of E & E, and will be returned on demand.

**30. WORKING FILES** The Subcontractor shall maintain accurate working files containing all work documentation including calculations, assumptions, interpretations of regulations, source of information, and other raw data required in the performance of this agreement. The Subcontractor shall provide the information contained in its working files to E & E upon request.

**31. TECHNICAL DATA**

The Subcontractor hereby agrees to deliver to the E & E START Financial Manager within thirty (30) days after being requested to do so by E & E, the following documents:

A. All originals and copies, and all abstracts and excerpts therefrom, of all information supplied to the Subcontractor by E & E and specifically designated "Confidential Business Information," pursuant to the article entitled "Treatment of Confidential Business Information."

B. All originals and copies, and all abstracts and excerpts therefrom, all information collected by the Subcontractor directly from a business or from a source that represents a business or businesses, such as a trade association, pursuant to the Article entitled "Screening of Business Information for Claims of Confidentiality."

C. All originals (if originals are unavailable, copies will be acceptable) of all Technical Data<sup>1</sup> which is pertinent to the support of the Remedial Response Program and has been furnished to the Subcontractor by E & E or has been generated by the Subcontractor in performance of this agreement. In the event that there is any disagreement as to whether certain data is considered pertinent, the START Program Manager shall make the final determination. This determination shall not be subject to the terms of the Article entitled "Disputes."

D. Copies of all other types of additional data, including but not limited to: reference materials, source lists, field notes, log books, chemical data, maps, and photographs pursuant to the clause "Rights in Data--Special Works (EPAAR 1552.227-72).

E. Upon receipt of all data provided to E & E by the Subcontractor under this paragraph, E & E START Financial Manager shall acknowledge in writing to the Subcontractor the receipt of all confidential or other data.

### 32. TERMINATION BY E & E

Notwithstanding anything to the contrary in this Subcontract Agreement, termination of Subcontractor services hereunder shall be implemented in accordance with the terms set forth in this paragraph:

A. This Subcontract Agreement may be terminated by E & E at any time (1) upon termination of the Contract by the client; (2) for convenience upon reasonable notice to Subcontractor; or (3) in whole or in part for any breach of this Agreement, upon notice by E & E to the Subcontractor in accordance with the remedy provisions of Article 33.

B. In the event that termination is invoked, E & E's sole responsibility shall be for the

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<sup>1</sup>"Technical Data" as used herein means recorded information, regardless of form or characteristic, of a scientific or technical nature. It may document research, experimental, developmental, or engineering work; or be usable or used to define a process or to procure, produce, support, maintain, or operate material. This data may be graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design type documents; in machine forms such as punched cards, magnetic tape, computer disks or printouts of data retained in computer memory. Examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information.

services and products provided by Subcontractor which were accepted as satisfactory by the client prior to the termination date and for which costs E & E is reimbursed by the client. This subparagraph in no way limits E & E's rights as set forth in Article 33 herein.

C. Upon receipt of a notice of termination, the Subcontractor shall promptly discontinue all services affected (unless the notice directs otherwise), and shall deliver or otherwise make available to E & E all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated in performing this Agreement, whether completed or in progress.

### 33. REMEDY IN THE EVENT OF BREACH BY THE SUBCONTRACTOR

A. In the event of any breach or failure by the Subcontractor to perform under this Agreement, E & E shall be entitled to avail itself of any and all of the following remedies:

- (1) E & E may reject equipment, material and/or services provided by the Subcontractor which are not in conformance with the contract requirements;
- (2) E & E may suspend or stop performance of any and all site services under this agreement;
- (3) E & E, at its discretion, may complete the work or retain the services of a third-party to complete the work and recover from the Subcontractor any increased costs or deduct such increased costs from any amounts due the Subcontractor under this Subcontract.
- (4) E & E may terminate this Subcontract Agreement for default;
- (5) E & E may require the Subcontractor to remedy by correction or replacement, without cost to E & E, any breach of or failure to comply with the requirements of this Subcontract Agreement;
- (6) E & E may withhold and apply any funds due the Subcontractor for any work performed under this Agreement or under any other Contract or Subcontract between E & E and Subcontractor to reimburse E & E for any amounts that it is entitled to recover under this Article 33, to offset increased costs to be incurred as a result of such breach, or to satisfy any existing or future liability on the part of the Subcontractor which arises or may arise from such breach.

B. The foregoing remedies apply in the same manner and to the same extent to corrected or replacement materials or services, as to materials and services originally delivered or required to be delivered under this Agreement.

C. The failure of E & E to insist, in one or more instances, upon the performance of any

term of this contract is not a waiver of E & E's right to future performance of such term, and the Subcontractor's obligation for future performance of such term shall continue in effect.

D. The right and remedies of E & E in this paragraph are in addition to any other rights and remedies provided by law or under this contract.

34. NO WAIVER

No waiver by either party in any default by the other party in the performance of any provision of this Subcontract shall operate as or be construed as a waiver of any future default whether like or different in character.

35. INSURANCE COVERAGE TO BE FURNISHED BY SUBCONTRACTOR

The Subcontractor shall maintain, at its own expense, such insurance as is required by law or regulation, and at a minimum the types and amounts of insurance set forth in that clause of the General Conditions entitled, "Insurance", at the Subcontractor's sole expense, as follows:

A. The Subcontractor shall procure and maintain such insurance as is required by law or regulation, including that required by Subpart 28.3 of the Federal Acquisition Regulations (FAR) as of the date of execution of this Subcontract, and such insurance as the Contracting Officer prescribes by written direction.

B. At a minimum, the Subcontractor shall procure and maintain the insurance set forth in Exhibit 3, attached.

C. With respect to any insurance policy, all or part of the premiums of which the Subcontractor proposes to treat as a direct cost under this Subcontract, and with respect to any proposed qualified program of self-insurance, the approval of the START Financial Manager shall be obtained prior to any claim for payment therefor. The Subcontractor shall be reimbursed for the portion allocable to this Subcontract.

D. The Subcontractor hereby agrees to indemnify, defend and hold harmless E & E, its directors, officers, agents and employees against any and all claims, loss, damage, injury, statutory or regulatory violation, liability to or death of any person, including any employee of E & E, Client or Subcontractor, or for loss of or damage to the property, including claims thereof and reasonable attorneys fees arising therefrom, arising out of or related to the negligent acts, errors or omissions of Subcontractor in performing pursuant to this Agreement.

**36. STANDARDS**

All services hereunder shall be performed by employees or agents of Subcontractor who are experienced and highly skilled in their profession, and in accordance with the highest standards of workmanship in their professions.

**37. DISPUTES**

Should any dispute arise between E & E and the Subcontractor or between E & E and the Government concerning the work performed by the Subcontractor under this Subcontract, the Subcontractor agrees to be bound by the decision of the EPA Contracting Officer, and any appeals therefrom, to the same extent E & E is bound. A claim based on such an unresolved dispute shall be asserted by E & E on behalf of the Subcontractor against the Government under the provisions of FAR Paragraph 52.233-1 and the Contract Disputes Act of 1978 (41 USC.601-613). The Subcontractor agrees to pay the cost of the prosecution or the processing of any dispute between E & E and the Government concerning work performed by the subcontractor, and including but not limited to administrative and legal expenses incurred by E & E in prosecuting any such claim on behalf of the Subcontractor.

The Subcontractor also agrees to pay the cost of any appeal, including but not limited to, E & E's legal fees and disbursements, asserted at the Subcontractor's request by E & E from the EPA Contracting Officer's decision concerning work performed by the Subcontractor.

**38. DESIGNATION OF PROPERTY ADMINISTRATOR**

The Contract Property Administrator, DCMAO, 111 West Huron Street, Room 1103, Buffalo, New York 14202-2392 is hereby designated the property administration function for this Subcontract. The Subcontractor agrees to furnish information regarding Government property to the Contract Property Administrator in the manner and to the extent required by the Contract Property Administrator or his duly designated successors, or by the E & E START Financial Manager.

**39. ENTIRE AGREEMENT**

This Subcontract, with all Exhibits and materials incorporated herein by reference and made part hereof, shall constitute the entire understanding between the parties and no conversations, memoranda, or other matters, whether written or oral, and previously exchanged between the parties hereto, shall alter the terms of this Subcontract.

40. GOVERNING LAW

The parties hereby agree that this Subcontract, including its validity and interpretation, shall in all respects be governed by the laws of the State of New York.

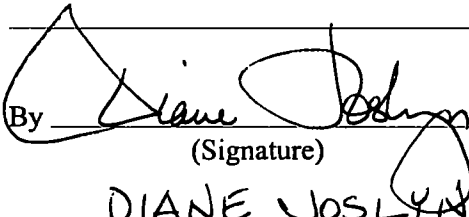
41. JURISDICTION

This Subcontract shall be deemed to be executed in and performed in the County of Erie, of the State of New York, and any action brought pursuant to this Subcontract may be brought only in the Supreme Court of the State of New York, County of Erie.

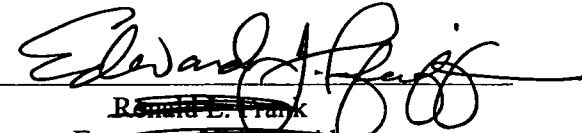
IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

AGREED TO AND ACCEPTED:

AQUADRILL, INC

By   
(Signature)  
DIANE JOSLYN  
(Printed or Typed Name)  
VP/COO  
(Title)

ECOLOGY AND ENVIRONMENT, INC.

By   
~~Ronald L. Frank~~  
~~Executive Vice President~~  
Edward J. Heiffer  
START Contract Financial Manager

**EXHIBIT 1**  
**STATEMENT OF WORK**

**EXHIBIT 1**

**MONITORING WELL ABANDONMENT**

**STATEMENT OF WORK**

**for the**

**R. V. Hopkins Site**

**Davenport, Iowa**

**TDD #: S07-9905-017**

**PAN #: 1264RVTZXX**

**Project Manager: Jeff Gadt**

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## **STATEMENT OF WORK**

Under the Superfund Technical Assessment and Response Team (START) contract with the United States Environmental Protection Agency (EPA), Ecology and Environment (E & E) has been tasked to abandon one (1) two-inch PVC monitoring well, which was installed as part of a site investigation of the adjoining R. V. Hopkins site in Davenport, Iowa. The abandonment procedures will be in accordance with requirements of the state of Iowa.

## **1.0 INFORMATION TO BIDDERS**

Questions regarding specific aspects of the work to be performed should be directed to the attention of the E & E START project manager, (b) (4)

A minimum of two subcontractor personnel are required to perform this job task. Prior to the commencement of work E & E will conduct a site orientation and safety session. This session will be held at the site or at a mutually agreeable location. It is the subcontractor's responsibility to have enough personnel present at the training session to adequately cover any unanticipated crew member changes. Coordination and scheduling of the meeting will be with the above named E & E START project manager.

Access to the property will be arranged by E & E prior to commencement of the project. All subcontractor personnel must coordinate entry onto the site with E & E. Access to the well locations can be gained by conventional vehicles.

E & E will measure the static water levels and calculate the approximate volumes of materials required to seal the monitoring well prior to the start of work.

The present schedule calls for mobilization of equipment and personnel on-site by August 12, 1999. At this time the subcontractor must have the appropriate personnel and all equipment necessary to complete the job on-site. Access to clean potable water will be the responsibility of the subcontractor. In addition, electricity may not be available on-site and the provision of generators is the responsibility of the subcontractor.

## 2.0 BACKGROUND

The monitoring well (MW-4) was installed in June 1984 on the Midwest Metals, Inc. property as part of a 5-well ground water monitoring system for the R. V. Hopkins site, which is located on the adjoining property to the west. These properties are located in Davenport, Iowa, near the Mississippi River. The monitoring wells were installed during an EPA site investigation to determine if the ground water in the area had been impacted by wastes generated at this drum recycling site (R. V. Hopkins). A previous EPA inspection and limited sampling event at the R. V. Hopkins site indicated the potential for off-site migration of contaminants generated from on site waste disposal practices. MW-4 has an approximate depth of 15 feet, with a screened interval from 5 to 15 feet. The analytical results of sampling conducted in June 1984 revealed the presence of volatile organic compounds (VOCs) in the wells. In MW-4, chloroform and trans-1,2-dichloroethane were detected at concentrations of 15  $\mu\text{g/L}$  and 5.5  $\mu\text{g/L}$ , respectively. Because of apparent frost heave damage to MW-4, EPA has been asked to properly abandon the well.

### **3.0 SCOPE OF WORK**

The subcontractor is to furnish all materials, equipment and labor necessary for the abandonment of one (1) two-inch monitoring well in accordance with Iowa Department of Natural Resources (IDNR) regulations as found in 567-39.8(455B)(3) Abandoned Well Plugging Procedures Class 2 wells.

#### **3.1 WELL SEALING**

The subcontractor will backfill the well with “sealing materials”, neat cement/bentonite grout, to four feet below the ground surface. Neat cement bentonite (94 lb. bag of Portland cement, 5% bentonite, and 6 gallons of clean water) grout will be placed using a tremie pipe. The tremie pipe will remain a minimum of two feet below the top of the pour at all times and be retracted slowly as the well is filled from the bottom to the top. Assume the well is 15 feet deep.

#### **3.2 WELLHEAD REMOVAL/RESTORATION**

The subcontractor will remove and dispose of the well protection materials (concrete well pads, protective casing, etc) and excavate soil to expose the casing to a depth of four feet below ground surface. The PVC casing pipe will be removed/cut to a depth of four feet below the ground surface and should be capped with a minimum of one foot of neat cement. The cap will extend six or more inches beyond the outside diameter of the remaining well casing and will terminate three feet below ground surface. **As an alternative, the subcontractor has the option of pulling out the entire well casing and screen and sealing the borehole prior the emplacement of the neat cement cap.**

The remaining three feet will then be backfilled with native soil and graded so that surface water is directed away from the abandoned well location. Grass sod, if necessary to conform to the surrounding landscape, will be placed over the area and watered. Restoration will be complete when conducted to the satisfaction and approved by the E & E project manager.

### **3.3 DECONTAMINATION**

Prior to and after the well abandonment, all equipment shall be thoroughly cleaned to remove all oil, grease, mud, tar, etc. This cleaning process shall consist of the following:

- 1) A hot water cleaning with a low sudsing-detergent (i.e., Alconox).
- 2) A tap water rinse.

E & E personnel will inspect all equipment to insure sufficient cleaning. The subcontractor must provide all equipment necessary for this cleaning process.

### **3.4 HEALTH AND SAFETY**

Because the site is listed as a hazardous waste site, all subcontract personnel must have the 40-hour OSHA certification. **The subcontractor will prepare and submit to E & E a site specific Health and Safety Plan detailing all tasks to be performed prior to initiation of the field activities.**

E & E anticipates that all work will be performed in Level D personal protection, which will consist of coveralls and steel toed boots.

## **5.0 BID ITEMS**

### **Item 1. Mobilization and Demobilization**

This item will carry all charges incidental to equipment set-up and removal, in order that the charges need not be distributed among the more variable items of the contract. This item will be paid at the contract lump sum price for mobilization and demobilization and will include the furnishing of personnel, machinery, tools and all other equipment necessary to carry on and complete the work properly. All material and equipment furnished under this item will remain the property of the subcontractor and will be maintained, cared for, and disposed of by the subcontractor.

### **Item 2. Well Abandonment**

This item will include all materials (cement, bentonite, etc) and labor costs for providing two personnel on-site to abandon one 15 foot deep 2-inch PVC monitoring wells. Abandonment will include all tasks discussed in Section 2: Scope of Work. Payment for this item will be made at the hourly rate as bid. It is estimated that the abandonment will require a maximum of 4 hours.

### **Item 3. Site Restoration**

This item will include all charges incidental to the restoration of each well site including restoring the original grade, maintaining a slight slope over the original well location and re-sodding the wellhead location. Payment for this item will be made as a lump sum for the one location.

### **Item 4. Material Disposal**

This item will carry charges for the disposal of the removed well protection materials (concrete well pads, protective covers, etc) at the municipal landfill. Payment will be made as a lump sum for all materials.

**Item 5. Decontamination Time**

This item will include all charges for labor and equipment necessary to decontaminate the well abandonment equipment prior to and after the well abandonment. Payment will be made at the hourly rate as bid.

**Item 6. Delay Time**

If work by the subcontractor is delayed for more than 30 minutes as a result of action by E & E, the subcontractor will be entitled to reimbursement for each delay in excess of 30 minutes. Both the subcontractor and E & E will jointly record and verify any such instances and the time involved in excess of 30 minutes. At the project completion, the subcontractor will be paid for the accumulated totals of these delays. Payment will be at the hourly rate as bid. This payment does not include time for difficult moving.

**Item 7. Difficult Moving Time**

This item will include only charges for time in excess of 30 minutes required to move equipment on and off the well location if access is judged to be more difficult than would normally encountered. Such an instance must also be jointly recorded by the subcontractor and E & E. Payment will be at the hourly rate as bid.

**EXHIBIT 2**  
**COST/PRICE DATA**

**EXHIBIT 2**

COST/PRICE DATA

(b) (4)

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**BID ESTIMATE SHEET**

(b) (4)

## APPENDIX A

### STATEMENT OF MEDICAL FITNESS

This is to confirm that the following employees may engage in field activities at the Tri-County Public Airport site in connection with the Subcontract Agreement between E & E and > \_\_\_\_\_, dated > \_\_\_\_\_, 1998, and that all of said employees are medically fit both to perform required field activities and to utilize respiratory equipment in accordance with 29 CFR, Part 1910 and "U.S. EPA Standard Operating Safety Guides". 1094.

(b) (4)

**APPENDIX B**

**STATEMENT OF HEALTH AND SAFETY TRAINING**

(b) (4)

(b) (4)

(b) (4)



(b) (4)

## **APPENDIX D**

---

### **Levels of Personnel Protection**

## **LEVELS OF PERSONNEL PROTECTION**

### **LEVEL A**

1. MSA 401 self-contained breathing apparatus
2. East Wind CP2000 encapsulating suit
3. White cotton coveralls
4. Cotton underwear
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber or PVC booties
8. Disposable gloves\* (additional pair)
9. Disposable booties\* (additional pair)
10. Hard hat\*
11. Cool pack\*

### **LEVEL B**

1. MSA 401 self-contained breathing apparatus
2. Butyl rubber apron, ankle length with sleeves
3. Butyl rubber or neoprene gloves
4. Surgical gloves
5. Neoprene boots with steel toe and shank
6. Butyl rubber booties
7. Chemical-resistant coveralls
8. Cotton underwear
9. Disposable booties\* (additional pair)

10. Disposable gloves\* (additional pair)
11. Hard hat with face shield\*

### **LEVEL C**

1. MSA Ultra-Twin cartridge respirator
2. Robertshaw escape mask
3. Butyl rubber gloves
4. Butyl rubber apron, ankle length with sleeves
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber booties
8. Chemical-resistant coveralls
9. Cotton underwear
10. Disposable booties\* (additional pair)
11. Disposable gloves\* (additional pair)
12. Hard hat with face shield\*

### **LEVEL D**

1. Cotton coveralls
2. Cotton underwear
3. Safety boots/shoes
4. Safety glasses
5. Hard hat with optional face shield
6. Ultra-Twin cartridge respirator (readily available)
7. Robertshaw escape mask (readily available)

8. Work gloves

NOTE: E & E guidelines may at times exhibit minor modifications to U.S. EPA criteria.

\* Optional

**EXHIBIT 3**  
**INSURANCE REQUIREMENTS**

It is expressly understood and agreed that before work is actually commenced, Subcontractor and Sub-subcontractor, if any, unless expressly relieved of the insurance requirements specified below in writing by Ecology and Environment, Inc., (E & E), shall subscribe for and maintain in full force and effect during the progress of the work, the following minimum insurance coverage:

- A. Workers' Compensation and Employers' Liability insurance coverage in amounts sufficient to satisfy state law.
- B. Comprehensive General Liability insurance covering bodily injury in an amount of not less than \$1,000,000 per occurrence.
- C. Comprehensive General Liability insurance covering broad form property damage in an amount of not less than \$1,000,000 per occurrence.
- D. Professional Liability insurance in the amount of \$1,000,000 per occurrence.

Note: These certificates, with the exception of Workers' Compensation and Employers' Liability, shall specify Ecology and Environment, Inc. as additional insured and all shall require thirty (30) days prior notice of cancellation of coverage to E & E. Notice to E & E and E & E's written approval shall similarly be required where insurance coverages are decreased or other material change in coverage occurs.

Certificates shall be forwarded to:

Denise L. Goulding  
Ecology and Environment, Inc.  
368 Pleasant View Drive  
Lancaster, New York 14086

**ACORD****CERTIFICATE OF LIABILITY INSURANCE**POLICY ID NO.  
AQUAD-1DATE (MM/DD/YY)  
06/29/99**PRODUCER**

Millhiser Smith Agency, Inc.  
3100 Oakland Road N.E.  
Cedar Rapids IA 52402  
Phone: 319-365-8611 Fax: 319-365-6919

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

**INSURERS AFFORDING COVERAGE****INSURED**

Aquadrill Inc  
717 E Second Avenue  
Coralville IA 52241

INSURER A: Continental Western Insurance

INSURER B: Gulf Underwriters Ins Co

INSURER C:

INSURER D:

INSURER E:

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY	9QQ49	04/15/99	04/15/00	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire)	\$ 100,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person)	\$ 5,000
					PERSONAL & ADV INJURY	\$ 1,000,000
					GENERAL AGGREGATE	\$ 2,000,000
					PRODUCTS - COMPROP AGG	\$ 2,000,000
GEN'L AGGREGATE LIMIT APPLIES PER:						
<input type="checkbox"/> POLICY	<input type="checkbox"/> PRO-JECT	<input type="checkbox"/> LOC				
A	AUTOMOBILE LIABILITY	9QQ49	04/15/99	04/15/00	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	\$
	<input type="checkbox"/> HIRED AUTOS					
<input type="checkbox"/> NON-OWNED AUTOS						
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	\$
	<input type="checkbox"/> ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	\$
					AGG	\$
A	EXCESS LIABILITY	9QQ49	04/15/99	04/15/00	EACH OCCURRENCE	\$ 2,000,000
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE	\$ 2,000,000
						\$
	<input type="checkbox"/> DEDUCTIBLE					\$
	<input type="checkbox"/> RETENTION \$					\$
						\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	9QQ49	04/15/99	04/15/00	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
	E.L. EACH ACCIDENT				\$ 100000	
	E.L. DISEASE - EA EMPLOYEE				\$ 100000	
	E.L. DISEASE - POLICY LIMIT				\$ 500000	
B	OTHER	GUO466682	05/02/99	05/02/00	Per Claim	\$1,000,000
	Contractors Pollution Liability				Aggregate	\$1,000,000
		CPL/OCCURRENCE FORM				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

**CERTIFICATE HOLDER**

N

ADDITIONAL INSURED; INSURER LETTER:

**CANCELLATION**

ECOLOGY

Ecology and Environment Inc  
6405 Metcalf Bldg #3 Suite 404  
Overland Park KS 66202

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

Thomas D. King  
Thomas D. King

ACORD 25-S (7/97)

ACORD CORPORATION 1988

(b) (4)

(b) (4)

TDD: 1264RVTZXX  
PAN: S07-9905-017

(b) (4)

(b) (4)

(b) (4)

(b) (4)

# ACORD CERTIFICATE OF LIABILITY INSURANCE

POLICY ID  
AQUAD-1DATE (MM/DD/YY)  
06/29/99**PRODUCER**

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INSURER LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
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	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire) \$ 100,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person) \$ 5,000
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC				PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPROP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY	9QQ49	04/15/99	04/15/00	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$
	<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC \$
					AUTO ONLY: AGG \$
A	EXCESS LIABILITY	9QQ49	04/15/99	04/15/00	EACH OCCURRENCE \$ 2,000,000
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE \$ 2,000,000
	<input type="checkbox"/> DEDUCTIBLE				\$
	<input type="checkbox"/> RETENTION \$				\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	9QQ49	04/15/99	04/15/00	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
					E.L. EACH ACCIDENT \$ 100000
					E.L. DISEASE - EA EMPLOYEE \$ 100000
					E.L. DISEASE - POLICY LIMIT \$ 500000
B	OTHER	GUO466682 CPL/OCCURRENCE FORM	05/02/99	05/02/00	Per Claim \$ 1,000,000
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DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

**CERTIFICATE HOLDER**

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ADDITIONAL INSURED; INSURER LETTER:

**CANCELLATION**

ECOLOGY

Ecology and Environment Inc  
6405 Metcalf Bldg #3 Suite 404  
Overland Park KS 66202

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Thomas D. King  
Thomas D. King

ACORD 25-S (7/97)

ACORD CORPORATION 1988

aquadrill

717 East Second Avenue  
Coralville, Iowa 52241

Phone (319) 338-5052  
Fax (319) 338-8953

29 June 1999

Jeff W. Gadt  
Ecology and Environment, Inc.  
6405 Metcalf, Building 3, Suite 404  
Overland Park, Kansas 66202-3958

Re: R.V. Hopkins, Inc. Site, Davenport, Iowa

Dear Mr. Gadt:

In accordance with your request for proposals, we are submitting the following items relative to the referenced project:

1. Bid sheet for abandonment of monitoring well
2. Appendix A - Statement of Medical Fitness
3. Appendix B - Statement of Health and Safety Training
4. Representations and Certifications Regarding Subcontractor Status
5. Certificate of Insurance
6. Informational packet regarding Aquadrill, Inc., including Statement of Services, personnel resumes, and major equipment list.

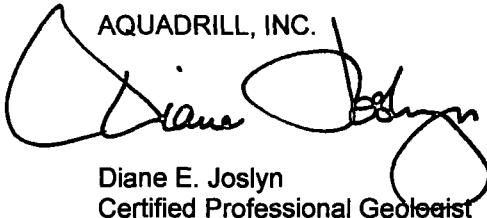
Three references which may be contacted regarding our experience and performance would include the following:

John Moylan, Woodward Clyde Consultants (913/344-1000)  
Martha Hildebrandt, Burns & McDonnell (816/333-8787)  
Deborah English, Black & Veatch Special Projects (913/339-2900)

We appreciate the opportunity to provide this bid package and look forward to working with Ecology & Environment again.

Respectfully submitted,

AQUADRILL, INC.



Diane E. Joslyn  
Certified Professional Geologist



(b) (4)

(b) (4)

**Roberts/Schornick & Associates, Inc.****Fax Transmittal**

**To:** Brian Mitchell  
**Location:** EPA Region VII/RESP Branch  
**Date:** September 25, 1998  
**Fax Number:** 1/913-551-7947  
**From:** Bill Pickens  
**Pages Transmitted (Including Cover Page):** 4  
**Message:**

---

Attached are copies of the Ecology & Environment, Inc. letter and the stamped survey plat for the Midwest Metals site in Davenport Iowa. As noted on the survey plat, the top of casing elevation for monitoring well MW-4 was 568.03 in June 1998. In 1985, the elevation was 567.18. This indicates that the casing has heaved approximately 10 inches. Please call if you have any questions or comments.

xc: Bill Taylor, Gate City Steel (SD#25)

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TDD #R07-8402-130

Page Three

and 1,1-dichloroethane were detected in the groundwater sample of MW#4 at approximately 5.9 ug/l and 5.0 ug/l respectively. Trans-1-2-dichloroethene has a 10-day EPA SNARL of 270 ug/l. There are no EPA or NAS SNARLS applicable to 1,1-dichloroethane.

Total xylenes were detected in both of the samples collected from MW#1 at 48 ug/l and 59 ug/l duplicate respectively. Both of these concentrations are within the EPA and NAS SNARLS (See Table 3).

#### MONITORING WELL ELEVATIONS:

The elevations of each of the monitoring wells, measured to the top of the PVC well casings are listed below. The elevations previously listed in the R.V. Hopkins, Inc. - Trip Report (TDD # R07-8402-130) dated May 17, 1985 were measured to the top of the outer steel casing. The measurements listed below will be used to measure groundwater elevations.

Monitoring Well #1 - 566.72 ft. above mean sea level  
Monitoring Well #2 - 565.28 ft. above mean sea level  
Monitoring Well #3 - 570.01 ft. above mean sea level  
Monitoring Well #4 - 567.18 ft. above mean sea level ✓  
Monitoring Well #5 - 565.93 ft. above mean sea level

The groundwater elevations of each of the monitoring wells on April 30, 1985 were as follows:

Monitoring Well #1 - 563.39 ft. above mean sea level  
Monitoring Well #2 - 557.45 ft. above mean sea level  
Monitoring Well #3 - 563.68 ft. above mean sea level  
Monitoring Well #4 - 557.18 ft. above mean sea level  
Monitoring Well #5 - 558.64 ft. above mean sea level

#### SUMMARY AND CONCLUSIONS:

Arsenic, barium, cadmium, silver, mercury, and cyanides were either undetected at the detection limits or were less than the referenced drinking water standards. Dissolved lead was detected in the samples at seven times the EPA Safe Drinking Water Act primary standards. Dissolved manganese was detected in all the groundwater samples collected at concentrations exceeding the EPA Safe Drinking Water Act secondary criteria by 12 - 240 times. Chromium (total) was present in all the groundwater samples collected except AKJX5.002 (MW#5). These concentrations ranged from 5.0 ug/l to 28.0 ug/l but were not comparable to an EPA drinking water standard which is based upon hexavalent chromium.

Di-n-butyl phthalate was detected only in the groundwater sample from MW#4, the offsite monitoring well. In addition, 2,4-dimethylphenol was the only other semivolatile compound detected by analysis.



# MISSMAN, STANLEY & ASSOCIATES, P.C.

Civil Engineering • Surveying • Environmental Services • GIS Services

1011 27th Avenue, Box 8040  
(309) 788-7844

Rock Island, Illinois 61204-8040  
FAX (309) 788-7691

## FACSIMILE TRANSMISSION

TO: RSA

ATTENTION: Cheryl

RE: Midwest Metals - Davenport, Iowa

DATE: 9/25/98

NUMBER OF SHEETS, INCLUDING THIS SHEET 2

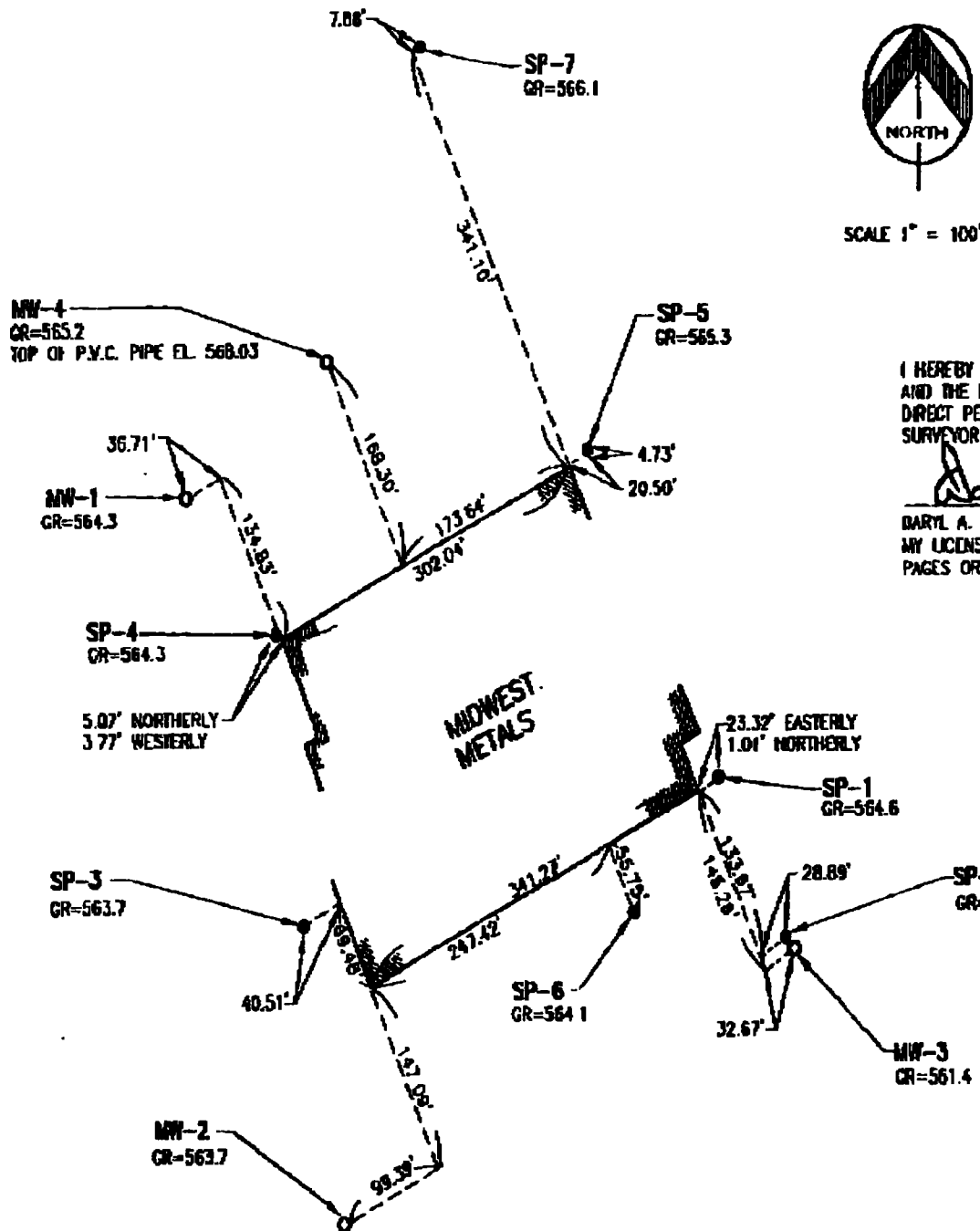
REMARKS: This is a reduced copy. It  
will not scale. We will be sending  
the original through the mail.

FROM: C.C. Rhine

PLEASE CALL (309) 788-7644 IF YOU DID NOT RECEIVE ALL PAGES.

The information contained in this facsimile transmittal is intended only for the personal and confidential use of the designated recipient(s) named above. If the reader of this message is not the intended recipient or an agent responsible for delivering it to the intended recipient, you are hereby notified that you have received this document in error, and that any review, dissemination, distribution or copying of this message is strictly prohibited. If you have received this communication in error, please notify our office immediately by telephoning collect, and return the original message to us at the above address by available mail service, at our expense.

Prepared by:  
MISSMAN, STANLEY AND ASSOCIATES  
Land Surveyors and Civil Engineers  
Rock Island, Illinois

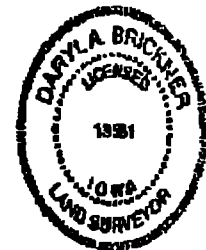


I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED SURVEY WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A FULLY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

*Daryl A. Brickner*

9-26-98

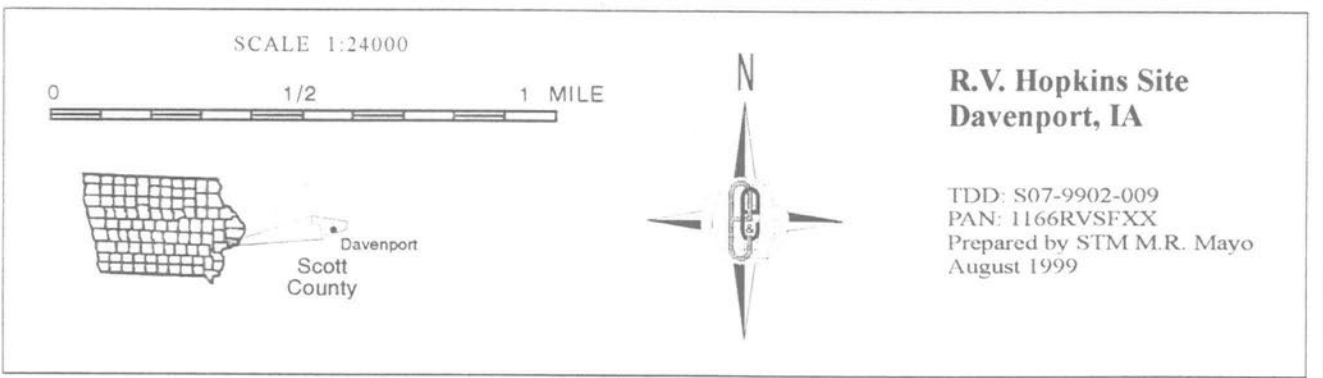
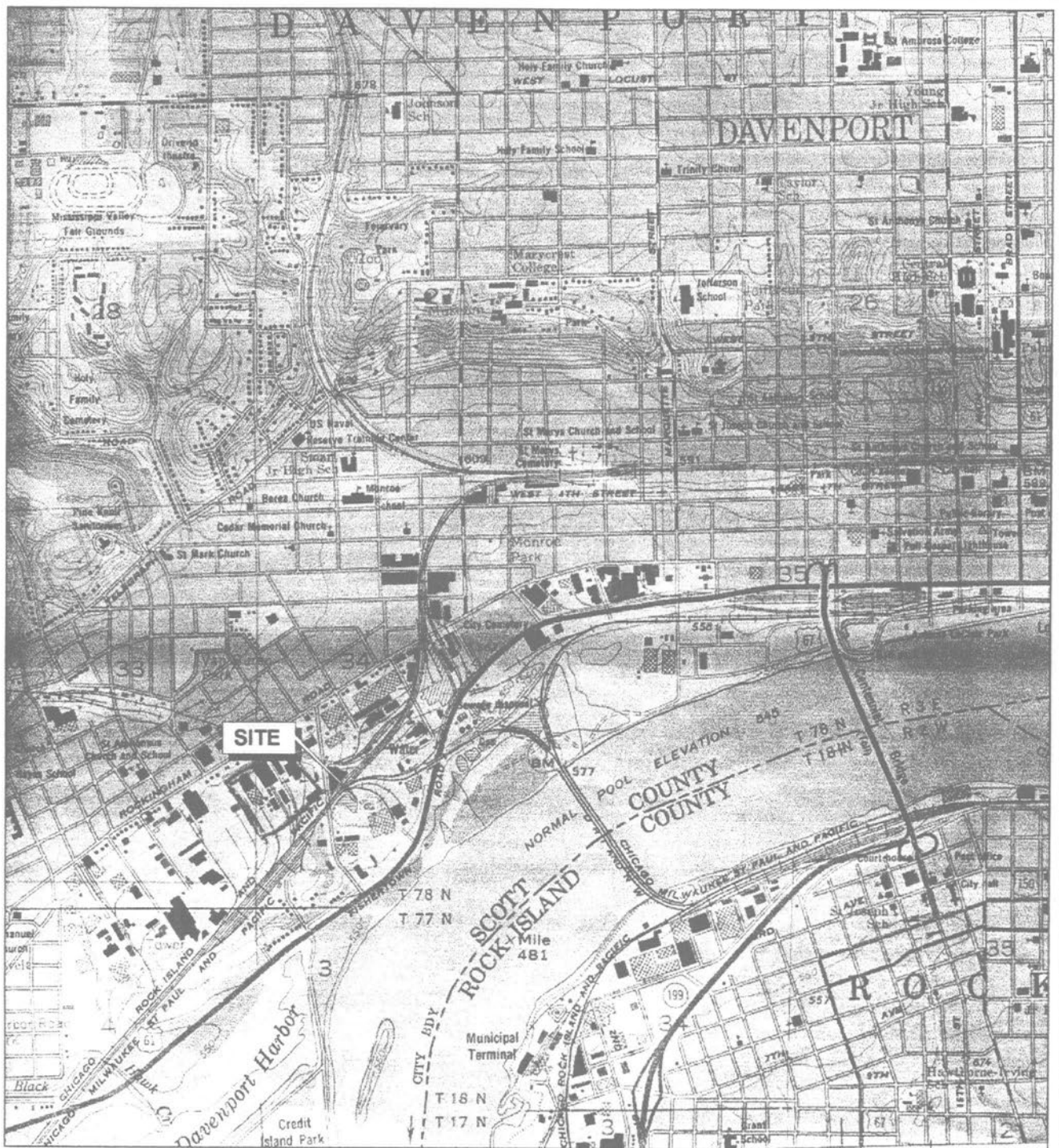
DARYL A. BRICKNER  
MY LICENSE RENEWAL DATE IS DECEMBER 31, 1999  
PAGES OR SHEETS COVERED BY THIS SEAL: 1



MIDWEST METALS  
Boring Holes  
and  
Monitoring Wells  
DAVENPORT, IOWA

JOB NUMBER C-98-S012

SHEET 1 OF 1



RVHOPSL.CDR

Source: USGS 7.5 minute series, 1975  
Davenport East, IA-ILL Quad.

Figure 1: Site Location Map

(b) (4)



# ecology and environment, inc.

International Specialists in the Environment

Cloverleaf Building 3, 6405 Metcalf  
Overland Park, Kansas 66202  
Tel: (913) 432-9961, Fax: (913) 432-0670

July 8, 1999

Diane Joslyn  
717 East Second Avenue  
Coralville, Iowa 52241  
(319) 338-5052

**RE: Subcontract Agreement:**  
**-TDD # S07-9905-017, PAN 1164RVTZXX**

Dear Ms. Joslyn:

Enclosed are two (2) unsigned copies of the referenced Subcontract Agreement.

Please have all copies signed by the appropriate corporate officer (**Note: Please examine all portions of the subcontract for the required information/signatures in order to complete the agreement on behalf of Aquadrill, Inc.**) and return them to the attention of Edward J. Pfeiffer, 368 Pleasant View Drive, Lancaster, New York 14086, for execution by Ecology and Environment, Inc., (E & E).

A completed executed agreement will be returned for your file.

E & E looks forward to working with your firm on this project. Should you have any questions, please do not hesitate to contact me at (913) 432-9961.

Sincerely,

Jeff Gadt  
START Project Geologist

cc: E. Pfeiffer - E & E New York  
File

(b) (4)

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11. AMENDMENTS IN WRITING

This Subcontract may be amended only by a further written agreement, duly executed, between the parties, and such amendment shall be subject to the prior approval of the Government. This Subcontract may not be changed orally.

12. NOTIFICATION OF CHANGES TO SUBCONTRACT

A. Definitions.

As used in this Article, the term "E & E START Financial Manager" does not include any representative of the E & E START Financial Manager, whether or not such representative is acting within the scope of his authority.

B. Notice.

The primary purpose of this Article is to obtain prompt reporting by the Subcontractor Contractor conduct which the Subcontractor considers to constitute a change to this Subcontract. Except for changes identified as such, the Subcontractor shall notify the E & E START Financial Manager promptly in writing, and in any event within ten (10) calendar days from the date the Subcontractor so identifies any Contractor conduct (including actions, inactions, and written or oral communications or changes in site conditions) that the Subcontractor regards as a change to the Subcontract terms and conditions. The notice shall state, on the basis of the most accurate information available to the Subcontractor, the following:

- (1) the date, nature and circumstance of the conduct regarded as a change;
- (2) the name, function, and activity of each individual, Contractor, and Subcontractor official or employee, involved in or knowledgeable of such conduct;
- (3) the identification of any document(s) and the substance of any oral communication involved in such conduct; and
- (4) the particular elements of contract performance for which the Subcontractor may seek an equitable adjustment under the "Changes" clause, including:

- (a) those portions of the Subcontract statement of work the Subcontractor believes will be affected by the alleged change;
- (b) the estimated adjustment to the Subcontract with respect to estimated cost and/or fixed fee, delivery or performance schedule; and other provisions affected by the alleged change.

**C. Continued Performance**

The Subcontractor shall not proceed with the alleged changes as identified in the notice required by B. above, unless notified in advance in writing by the E & E Region VII START Financial Manager, in accordance with D (1), below. Until such notification is received, the Subcontractor shall continue performance of this Subcontract in accordance with its terms and conditions.

**D. E & E Response**

The E & E Region VII START Financial Manager shall respond in writing to the notice required by B. above. In such response, the E & E START Financial Manager shall either:

- (1) confirm that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance in accordance with the "Changes" clause;
- (2) countermand any communication regarded as a change;
- (3) deny that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance; or
- (4) in the event the Subcontractor's notice information is deemed inadequate to enable the making of a response as set forth in (1), (2) or (3) above, advise the Subcontractor when additional information is required and establish the date by which such additional information is to be furnished.

**E. Equitable Adjustments**

If the E & E VII START Financial Manager confirms that E & E or Government conduct effected a change within the scope of the "Changes" clause, as alleged by the Subcontractor, and such conduct causes an increase or decrease in the estimated cost of, or the time required for the performance of, any part of the work under this Subcontract, whether changed or not changed by such conduct, an equitable adjustment may be made in accordance with the "Changes" clause of this Subcontract.

**13. NOTICES**

All notices and other communications required to be given under this Subcontract, and in the absence of specific direction otherwise, shall be deemed effectively made or given if written

and delivered to the appropriate party at the address listed below, or at such other address or  
(b) (4)

14. COMPLIANCE WITH LAWS

Subcontractor shall comply with all applicable state, federal, and local laws and executive orders and regulations in the performance of its services hereunder.

15. HEALTH AND SAFETY

A. General

Subcontractor acknowledges that it has a primary duty to prevent on the job accidents and to protect the health and safety of its employees. Subcontractor understands and acknowledges that this Subcontract will entail work at sites that pose potential exposure to hazardous materials and that such work is inherently dangerous. Subcontractor also understands that accidents, bodily injury, or property damage could result from human errors in judgement, mistakes, carelessness, forgetfulness, sloppiness, and work performed in haste. It is the duty and responsibility of the Subcontractor to train and supervise all its personnel and activities to prevent such occurrences. Subcontractor represents that it has the requisite corporate resources and expertise to perform the services hereunder.

B. Requirements

At a minimum, Subcontractor shall in all cases strictly comply with all relevant or applicable Federal, State, and local legal regulatory requirements, guidelines, and generally accepted procedures and standards of practices governing the physical and chemical hazards associated with the provision of said services, including the appropriate requirements set forth in 29 CFR Parts 1910 and 1926, including in particular, the provisions of 29 CFR 1910.120;

1910.132; 1910.133; and 1910.134. Subcontractor will also comply with any special requirements necessary to accommodate specific site conditions.

**C. Site Health and Safety Plans**

Subcontractor shall determine the necessary methods and means to accomplish the purposes of this Agreement and take all necessary measures to ensure that said purposes are achieved safely under its direction. Subcontractor agrees to submit to E & E its health and safety plan relating to site activities prior to commencement of work. Subcontractor further acknowledges that E & E bears no duty or legal responsibility to supervise Subcontractor personnel. Any advice or direction provided by E & E or the client shall not relieve Subcontractor or any of its employees of any obligations hereunder, unless such advice and direction is provided in writing to the Subcontractor, in accordance with paragraph 13 hereunder.

**D. Procedures**

Subcontractor agrees at a minimum to abide by all EPA safety and health programs and procedures while performing any on-site services in connection with this Agreement. Subcontractor further agrees to adhere to its Health and Safety Plan for site activities and understands and agrees that failure to do so may result in the shutdown of Subcontractor activities by E & E or the EPA and concurrently, the assumption by Subcontractor of legal responsibility for additional costs and damages pursuant to paragraph 33 of this Agreement. The Subcontractor further agrees to require any of its employees who are engaged in field work hereunder to submit to physical examinations and/or to comply with any health and/or medical program for preventative or remedial or other purposes, if and when required by the EPA.

**E. Medical Surveillance Program**

Each Subcontractor employee involved in field activities under this agreement should be enrolled in a medical surveillance program. The Subcontractor acknowledges that it is its sole responsibility to institute a medical surveillance program as required by 29 CFR 1910, including but not limited to 29 CFR 1910.120(f), and that the instituting of any such program shall be solely at its own expense. The Subcontractor agrees to submit to E & E a certification that each employee assigned to field operations on this project, is enrolled in a medical surveillance program, and has been medically certified by a physician for this work, including the use of a respirator. Certifications of employee medical status must be submitted to E & E before any employee shall be permitted to enter a hazardous waste site under this agreement. (See Medical Cert Form [H & S Training Cert Form.]

**F. Hazardous Waste Operations Training Program**

The Subcontractor shall arrange for and require that all of its employees who will be working on a hazardous waste site take a safety and health training course with annual refreshers which conform to the requirements specified in OSHA Regulations 29 CFR 1910.120(e). Certification of completion of such courses by each employee who is to work on site under this agreement shall be furnished to Ecology and Environment, Inc. prior to any such employee's entering the site for any purpose.

**G. First Aid Training and CPR Training**

The Subcontractor agrees that its employees will not enter any site under this agreement, unless a minimum of two field personnel are present on the site that are currently certified by the American Red Cross in both Multimedia First Aid and Cardiopulmonary Resuscitation (CPR)-Modular, or equivalent. These trained individuals need not be subcontractor employees.

**H. Use of Equipment and Protective Clothing at Hazardous Waste Sites**

The Subcontractor agrees that each employee shall wear such protective clothing and use such equipment as specified in the site Health and Safety Plan at all times when such employee is on the site. The Subcontractor hereby agrees to comply with the requirements set forth at 29 CFR 1910.134 including those provisions that require facial hair to be removed and/or special facepiece lenses to be utilized by persons with poor eyesight in the event respiratory equipment is to be used.

**16. EQUAL EMPLOYMENT OPPORTUNITY**

The provisions of the clause contained in FAR Subpart 22.8 in effect on the date hereof are hereby incorporated herein by reference with the following change: The word "Contractor" shall mean "Subcontractor."

**17. PROHIBITION AGAINST ASSIGNMENT -- SUBCONTRACTING**

It is understood and agreed that the Subcontractor shall be an independent contractor and that the Subcontractor shall not further subcontract out any of the work to be performed by it under this subcontract nor assign said Subcontract without, in each case, the prior written consent of E & E and of the Government, if appropriate.

**18. INCREMENTAL FUNDING**

It is understood that E & E's Prime Contract is being incrementally funded. It is, therefore, understood that this Subcontract is funded only to the extent funds are available to pay for the

Subcontractor's services in accordance with the Contract, and that the Subcontractor will be paid only to the extent funds are available for allocation to the Subcontractor under the Contract. E & E shall notify the Subcontractor thirty (30) days in advance of any period for which the Prime Contract with the Government has not been funded.

**19. CONSULTANT SERVICE**

The Subcontractor agrees to determine and notify E & E whether or not it or any consultant to be utilized by it under this Subcontract has in effect an agreement with the Federal Government for similar services, and if so, will advise the E & E START Financial Manager accordingly.

**20. FUTURE EXPERT CONSULTING SERVICES**

It is recognized that, subsequent to performance under this subcontract, the need may arise to provide expert testimony during hearings, and/or court proceedings involving site specific activities or other matters, with regard to which personnel provided by the subcontractor under this contract would have gained expertise as a result of tasks performed under this contract. Therefore, the subcontractor agrees to make available expert consulting services in support of such future proceedings, and to enter into intent agreements as necessary with lower tier subcontractors (if any) to ensure the availability of such subcontractor personnel. Agreement to provide such services in the future serves as a notice of intent only. Such services are not purchased hereby, and will be obtained, as required, through a separate contractual agreement.

**21. DESIGNATION OF PATENT ADVISOR**

The E & E START Financial Manager is hereby designated to represent E & E in administering the "Patents and Inventions" clause in this Subcontract. Correspondence with respect to this clause should be directed to the E & E START Financial Manager. The requirements of the "Patents and Inventions" clause regarding the identification and mailing address of the E & E START Financial Manager in this Subcontract may be satisfied by including this entire paragraph.

**22. FEDERAL REPORTS ACT**

In the event that it subsequently becomes a requirement of this Subcontract to collect identical information from ten (10) or more public respondents, the Federal Reports Act, 44 USC 3501, et seq., shall apply to this Subcontract. In such event, the Subcontractor shall not expend any funds to, or take any other action whatsoever, to solicit information from any of the public

respondents until the EPA Contracting Officer has notified E & E in writing that the required Office of Management and Finance final clearance has been obtained, and E & E has so notified the Subcontractor. The Subcontractor shall provide to the EPA Contracting Officer, and the E & E START Financial Manager, such information as will facilitate obtaining such clearance.

**23. SUBCONTRACT CONSENT**

This Subcontract, and all amendments thereto, are subject to the prior approval of the EPA Contracting Officer, as provided for in the clause of the General Provisions entitled, "Subcontracts".

**24. ORGANIZATIONAL CONFLICT OF INTEREST**

A. The Subcontractor warrants that, to the best of its knowledge and belief, and except as otherwise set forth in this Subcontract, it does not have any organizational conflict of interest as defined in Paragraph B, below.

B. The term "Organizational Conflict of Interest" means a relationship exists whereby the Subcontractor (including its chief executives, directors, and proposed consultants) has interests which:

- (1) May diminish its capacity to give impartial, technically sound, and objective advice and assistance, or may otherwise result in a biased work product; or
- (2) May result in an unfair competitive advantage. Such interests include, but are not limited to, present or proposed contractual arrangements with an industry to be studied, present or proposed contractual agreements with a firm which manufactures or sells any substance or item to be studied, present or proposed manufacture or sale of any substance or item to be studied, and present or proposed manufacture or sale of any substance or item in competition with a substance or item to be studied under the proposed Subcontract. It is not relevant that the Subcontractor has either the reputation of being able to resist the temptation to give biased advice or the ability to resist such temptation.

C. The Subcontractor agrees that, if after the effective date of this Subcontract, it discovers an organizational conflict of interest with respect to this Subcontract, it shall make an immediate and full disclosure in writing to the E & E START Financial Manager, which disclosure shall include a description of the action which the Subcontractor has taken, or proposes to take, to avoid, eliminate or neutralize the conflict. E & E may, however, terminate this Subcontract for its convenience in the event of any organizational conflict of interest.

D. The Subcontractor agrees further that if a conflict of interest were identified prior to

the execution of this Subcontract, it will adequately avoid, eliminate or neutralize the conflict in a manner satisfactory to the E & E Region VII START Financial Manager.

E. In the event the Subcontractor was aware of an organizational conflict of interest any time prior to or after the execution to this Subcontract, and intentionally did not disclose the conflict to E & E, E & E may terminate the Subcontract for default, and E & E and/or the Government may invoke such other remedies as may be authorized by law.

## **25. CONFLICTS OF INTEREST REGARDING PERSONNEL**

In addition to the requirements of Paragraph 24 Organizational Conflict of Interest, the following provision with regards to employee personnel performing under this subcontract shall apply.

The subcontractor agrees to immediately notify E & E's START Financial Manager of any actual, apparent, or potential personal conflicts of interest with regards to any subcontractor employee, or consultant working on or having access to information regarding this subcontract. A personal conflict of interest is defined as a relationship of an employee, or consultant with an entity that may impair the objectivity of the employee or consultant in performing the subcontract work. The subcontractor agrees to notify E & E's START Financial Manager prior to incurring costs for that employee's work where an employee may have a personal conflict of interest. In the event that the personal conflict of interest does not become known until after performance of the subcontract has begun, the Subcontractor shall immediately notify E & E START Financial Manager of the personal conflict of interest. The Subcontractor shall continue performance of this contract until notified by E & E's START Financial Manager of the appropriate action to be taken.

This paragraph shall apply to any subcontract or consultant agreement placed hereunder, except for subcontracts or consultant agreements for such services as well drilling, fence erecting, plumbing, utility hookups, security, electrical, or other similar services.

## **26. PROJECT EMPLOYEE CONFIDENTIALITY AGREEMENT**

The subcontractor agrees to obtain confidentiality agreements from all personnel working on requirements under this contract. Such agreements shall contain provisions which stipulate that each individual agrees not to disclose either in whole or in part to any entity external to EPA, DOJ, or the contractor, any technical data provided by the Government or generated by the contractor, any site specific cost information, or any enforcement strategy without first obtaining

the written permission of E & E. Such agreements shall be effective for the period of performance of E & E's prime contract and for a period of two years after the expiration of this contract, including any amendments to extend the term of this contract.

**27. INSPECTION AND ACCEPTANCE**

The E & E START Financial Manager, or his duly authorized or designated representative, is authorized to perform inspection for acceptance and to accept materials and services to be provided.

**28. F.O.B. POINT**

All items and materials required hereunder shall be delivered F.O.B. Destination (e.g., Job Site), with all shipping and transportation costs prepaid.

**29. TOOLS AND MATERIALS**

Tools and materials necessary for Subcontractor's performance shall be supplied by Subcontractor. Any tools or materials supplied by E & E, or created from performance of the Agreement, shall remain the property of E & E, and will be returned on demand.

**30. WORKING FILES** The Subcontractor shall maintain accurate working files containing all work documentation including calculations, assumptions, interpretations of regulations, source of information, and other raw data required in the performance of this agreement. The Subcontractor shall provide the information contained in its working files to E & E upon request.

**31. TECHNICAL DATA**

The Subcontractor hereby agrees to deliver to the E & E START Financial Manager within thirty (30) days after being requested to do so by E & E, the following documents:

A. All originals and copies, and all abstracts and excerpts therefrom, of all information supplied to the Subcontractor by E & E and specifically designated "Confidential Business Information," pursuant to the article entitled "Treatment of Confidential Business Information."

B. All originals and copies, and all abstracts and excerpts therefrom, all information collected by the Subcontractor directly from a business or from a source that represents a business or businesses, such as a trade association, pursuant to the Article entitled "Screening of Business Information for Claims of Confidentiality."

C. All originals (if originals are unavailable, copies will be acceptable) of all Technical Data<sup>1</sup> which is pertinent to the support of the Remedial Response Program and has been furnished to the Subcontractor by E & E or has been generated by the Subcontractor in performance of this agreement. In the event that there is any disagreement as to whether certain data is considered pertinent, the START Program Manager shall make the final determination. This determination shall not be subject to the terms of the Article entitled "Disputes."

D. Copies of all other types of additional data, including but not limited to: reference materials, source lists, field notes, log books, chemical data, maps, and photographs pursuant to the clause "Rights in Data--Special Works (EPAAR 1552.227-72).

E. Upon receipt of all data provided to E & E by the Subcontractor under this paragraph, E & E START Financial Manager shall acknowledge in writing to the Subcontractor the receipt of all confidential or other data.

### 32. TERMINATION BY E & E

Notwithstanding anything to the contrary in this Subcontract Agreement, termination of Subcontractor services hereunder shall be implemented in accordance with the terms set forth in this paragraph:

A. This Subcontract Agreement may be terminated by E & E at any time (1) upon termination of the Contract by the client; (2) for convenience upon reasonable notice to Subcontractor; or (3) in whole or in part for any breach of this Agreement, upon notice by E & E to the Subcontractor in accordance with the remedy provisions of Article 33.

B. In the event that termination is invoked, E & E's sole responsibility shall be for the

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<sup>1</sup>"Technical Data" as used herein means recorded information, regardless of form or characteristic, of a scientific or technical nature. It may document research, experimental, developmental, or engineering work; or be usable or used to define a process or to procure, produce, support, maintain, or operate material. This data may be graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design type documents; in machine forms such as punched cards, magnetic tape, computer disks or printouts of data retained in computer memory. Examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information.

services and products provided by Subcontractor which were accepted as satisfactory by the client prior to the termination date and for which costs E & E is reimbursed by the client. This subparagraph in no way limits E & E's rights as set forth in Article 33 herein.

C. Upon receipt of a notice of termination, the Subcontractor shall promptly discontinue all services affected (unless the notice directs otherwise), and shall deliver or otherwise make available to E & E all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated in performing this Agreement, whether completed or in progress.

### **33. REMEDY IN THE EVENT OF BREACH BY THE SUBCONTRACTOR**

A. In the event of any breach or failure by the Subcontractor to perform under this Agreement, E & E shall be entitled to avail itself of any and all of the following remedies:

- (1) E & E may reject equipment, material and/or services provided by the Subcontractor which are not in conformance with the contract requirements;
- (2) E & E may suspend or stop performance of any and all site services under this agreement;
- (3) E & E, at its discretion, may complete the work or retain the services of a third-party to complete the work and recover from the Subcontractor any increased costs or deduct such increased costs from any amounts due the Subcontractor under this Subcontract.
- (4) E & E may terminate this Subcontract Agreement for default;
- (5) E & E may require the Subcontractor to remedy by correction or replacement, without cost to E & E, any breach of or failure to comply with the requirements of this Subcontract Agreement;
- (6) E & E may withhold and apply any funds due the Subcontractor for any work performed under this Agreement or under any other Contract or Subcontract between E & E and Subcontractor to reimburse E & E for any amounts that it is entitled to recover under this Article 33, to offset increased costs to be incurred as a result of such breach, or to satisfy any existing or future liability on the part of the Subcontractor which arises or may arise from such breach.

B. The foregoing remedies apply in the same manner and to the same extent to corrected or replacement materials or services, as to materials and services originally delivered or required to be delivered under this Agreement.

C. The failure of E & E to insist, in one or more instances, upon the performance of any

term of this contract is not a waiver of E & E's right to future performance of such term, and the Subcontractor's obligation for future performance of such term shall continue in effect.

D. The right and remedies of E & E in this paragraph are in addition to any other rights and remedies provided by law or under this contract.

34. NO WAIVER

No waiver by either party in any default by the other party in the performance of any provision of this Subcontract shall operate as or be construed as a waiver of any future default whether like or different in character.

35. INSURANCE COVERAGE TO BE FURNISHED BY SUBCONTRACTOR

The Subcontractor shall maintain, at its own expense, such insurance as is required by law or regulation, and at a minimum the types and amounts of insurance set forth in that clause of the General Conditions entitled, "Insurance", at the Subcontractor's sole expense, as follows:

A. The Subcontractor shall procure and maintain such insurance as is required by law or regulation, including that required by Subpart 28.3 of the Federal Acquisition Regulations (FAR) as of the date of execution of this Subcontract, and such insurance as the Contracting Officer prescribes by written direction.

B. At a minimum, the Subcontractor shall procure and maintain the insurance set forth in Exhibit 3, attached.

C. With respect to any insurance policy, all or part of the premiums of which the Subcontractor proposes to treat as a direct cost under this Subcontract, and with respect to any proposed qualified program of self-insurance, the approval of the START Financial Manager shall be obtained prior to any claim for payment therefor. The Subcontractor shall be reimbursed for the portion allocable to this Subcontract.

D. The Subcontractor hereby agrees to indemnify, defend and hold harmless E & E, its directors, officers, agents and employees against any and all claims, loss, damage, injury, statutory or regulatory violation, liability to or death of any person, including any employee of E & E, Client or Subcontractor, or for loss of or damage to the property, including claims thereof and reasonable attorneys fees arising therefrom, arising out of or related to the negligent acts, errors or omissions of Subcontractor in performing pursuant to this Agreement.

**36. STANDARDS**

All services hereunder shall be performed by employees or agents of Subcontractor who are experienced and highly skilled in their profession, and in accordance with the highest standards of workmanship in their professions.

**37. DISPUTES**

Should any dispute arise between E & E and the Subcontractor or between E & E and the Government concerning the work performed by the Subcontractor under this Subcontract, the Subcontractor agrees to be bound by the decision of the EPA Contracting Officer, and any appeals therefrom, to the same extent E & E is bound. A claim based on such an unresolved dispute shall be asserted by E & E on behalf of the Subcontractor against the Government under the provisions of FAR Paragraph 52.233-1 and the Contract Disputes Act of 1978 (41 USC.601-613). The Subcontractor agrees to pay the cost of the prosecution or the processing of any dispute between E & E and the Government concerning work performed by the subcontractor, and including but not limited to administrative and legal expenses incurred by E & E in prosecuting any such claim on behalf of the Subcontractor.

The Subcontractor also agrees to pay the cost of any appeal, including but not limited to, E & E's legal fees and disbursements, asserted at the Subcontractor's request by E & E from the EPA Contracting Officer's decision concerning work performed by the Subcontractor.

**38. DESIGNATION OF PROPERTY ADMINISTRATOR**

The Contract Property Administrator, DCMAO, 111 West Huron Street, Room 1103, Buffalo, New York 14202-2392 is hereby designated the property administration function for this Subcontract. The Subcontractor agrees to furnish information regarding Government property to the Contract Property Administrator in the manner and to the extent required by the Contract Property Administrator or his duly designated successors, or by the E & E START Financial Manager.

**39. ENTIRE AGREEMENT**

This Subcontract, with all Exhibits and materials incorporated herein by reference and made part hereof, shall constitute the entire understanding between the parties and no conversations, memoranda, or other matters, whether written or oral, and previously exchanged between the parties hereto, shall alter the terms of this Subcontract.

40. GOVERNING LAW

The parties hereby agree that this Subcontract, including its validity and interpretation, shall in all respects be governed by the laws of the State of New York.

41. JURISDICTION

This Subcontract shall be deemed to be executed in and performed in the County of Erie, of the State of New York, and any action brought pursuant to this Subcontract may be brought only in the Supreme Court of the State of New York, County of Erie.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

AGREED TO AND ACCEPTED:

(b) (4)

**EXHIBIT 1**  
**STATEMENT OF WORK**

**EXHIBIT 1**

**MONITORING WELL ABANDONMENT**

**STATEMENT OF WORK**

**for the**

**R. V. Hopkins Site**

**Davenport, Iowa**

**TDD #: S07-9905-017**

**PAN #: 1264RVTZXX**

**Project Manager: Jeff Gadt**

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## **STATEMENT OF WORK**

Under the Superfund Technical Assessment and Response Team (START) contract with the United States Environmental Protection Agency (EPA), Ecology and Environment (E & E) has been tasked to abandon one (1) two-inch PVC monitoring well, which was installed as part of a site investigation of the adjoining R. V. Hopkins site in Davenport, Iowa. The abandonment procedures will be in accordance with requirements of the state of Iowa.

## **1.0 INFORMATION TO BIDDERS**

Questions regarding specific aspects of the work to be performed should be directed to the attention of the E & E START project manager, (b) (4) and questions concerning contract procedures should be addressed to the E & E Subcontractors Manager Ed (b) (4)

A minimum of two subcontractor personnel are required to perform this job task. Prior to the commencement of work E & E will conduct a site orientation and safety session. This session will be held at the site or at a mutually agreeable location. It is the subcontractor's responsibility to have enough personnel present at the training session to adequately cover any unanticipated crew member changes. Coordination and scheduling of the meeting will be with the above named E & E START project manager.

Access to the property will be arranged by E & E prior to commencement of the project. All subcontractor personnel must coordinate entry onto the site with E & E. Access to the well locations can be gained by conventional vehicles.

E & E will measure the static water levels and calculate the approximate volumes of materials required to seal the monitoring well prior to the start of work.

The present schedule calls for mobilization of equipment and personnel on-site by August 12, 1999. At this time the subcontractor must have the appropriate personnel and all equipment necessary to complete the job on-site. Access to clean potable water will be the responsibility of the subcontractor. In addition, electricity may not be available on-site and the provision of generators is the responsibility of the subcontractor.

## 2.0 BACKGROUND

The monitoring well (MW-4) was installed in June 1984 on the Midwest Metals, Inc. property as part of a 5-well ground water monitoring system for the R. V. Hopkins site, which is located on the adjoining property to the west. These properties are located in Davenport, Iowa, near the Mississippi River. The monitoring wells were installed during an EPA site investigation to determine if the ground water in the area had been impacted by wastes generated at this drum recycling site (R. V. Hopkins). A previous EPA inspection and limited sampling event at the R. V. Hopkins site indicated the potential for off-site migration of contaminants generated from on site waste disposal practices. MW-4 has an approximate depth of 15 feet, with a screened interval from 5 to 15 feet. The analytical results of sampling conducted in June 1984 revealed the presence of volatile organic compounds (VOCs) in the wells. In MW-4, chloroform and trans-1,2-dichloroethane were detected at a concentrations of 15  $\mu\text{g/L}$  and to 5.5  $\mu\text{g/L}$ , respectively. Because of apparent frost heave damage to MW-4, EPA has been asked to properly abandon the well.

### **3.0 SCOPE OF WORK**

The subcontractor is to furnish all materials, equipment and labor necessary for the abandonment of one (1) two-inch monitoring well in accordance with Iowa Department of Natural Resources (IDNR) regulations as found in 567-39.8(455B)(3) Abandoned Well Plugging Procedures Class 2 wells.

#### **3.1 WELL SEALING**

The subcontractor will backfill the well with "sealing materials", neat cement/bentonite grout, to four feet below the ground surface. Neat cement bentonite (94 lb. bag of Portland cement, 5% bentonite, and 6 gallons of clean water) grout will be placed using a tremie pipe. The tremie pipe will remain a minimum of two feet below the top of the pour at all times and be retracted slowly as the well is filled from the bottom to the top. Assume the well is 15 feet deep.

#### **3.2 WELLHEAD REMOVAL/RESTORATION**

The subcontractor will remove and dispose of the well protection materials (concrete well pads, protective casing, etc) and excavate soil to expose the casing to a depth of four feet below ground surface. The PVC casing pipe will be removed/cut to a depth of four feet below the ground surface and should be capped with a minimum of one foot of neat cement. The cap will extend six or more inches beyond the outside diameter of the remaining well casing and will terminate three feet below ground surface. **As an alternative, the subcontractor has the option of pulling out the entire well casing and screen and sealing the borehole prior the emplacement of the neat cement cap.**

The remaining three feet will then be backfilled with native soil and graded so that surface water is directed away from the abandoned well location. Grass sod, if necessary to conform to the surrounding landscape, will be placed over the area and watered. Restoration will be complete when conducted to the satisfaction and approved by the E & E project manager.

### **3.3 DECONTAMINATION**

Prior to and after the well abandonment, all equipment shall be thoroughly cleaned to remove all oil, grease, mud, tar, etc. This cleaning process shall consist of the following:

- 1) A hot water cleaning with a low sudsing-detergent (i.e., Alconox).
- 2) A tap water rinse.

E & E personnel will inspect all equipment to insure sufficient cleaning. The subcontractor must provide all equipment necessary for this cleaning process.

### **3.4 HEALTH AND SAFETY**

Because the site is listed as a hazardous waste site, all subcontract personnel must have the 40-hour OSHA certification. **The subcontractor will prepare and submit to E & E a site specific Health and Safety Plan detailing all tasks to be performed prior to initiation of the field activities.**

E & E anticipates that all work will be performed in Level D personal protection, which will consist of coveralls and steel toed boots.

## **5.0 BID ITEMS**

### **Item 1. Mobilization and Demobilization**

This item will carry all charges incidental to equipment set-up and removal, in order that the charges need not be distributed among the more variable items of the contract. This item will be paid at the contract lump sum price for mobilization and demobilization and will include the furnishing of personnel, machinery, tools and all other equipment necessary to carry on and complete the work properly. All material and equipment furnished under this item will remain the property of the subcontractor and will be maintained, cared for, and disposed of by the subcontractor.

### **Item 2. Well Abandonment**

This item will include all materials (cement, bentonite, etc) and labor costs for providing two personnel on-site to abandon one 15 foot deep 2-inch PVC monitoring wells. Abandonment will include all tasks discussed in Section 2: Scope of Work. Payment for this item will be made at the hourly rate as bid. It is estimated that the abandonment will require a maximum of 4 hours.

### **Item 3. Site Restoration**

This item will include all charges incidental to the restoration of each well site including restoring the original grade, maintaining a slight slope over the original well location and re-sodding the wellhead location. Payment for this item will be made as a lump sum for the one location.

### **Item 4. Material Disposal**

This item will carry charges for the disposal of the removed well protection materials (concrete well pads, protective covers, etc) at the municipal landfill. Payment will be made as a lump sum for all materials.

**Item 5. Decontamination Time**

This item will include all charges for labor and equipment necessary to decontaminate the well abandonment equipment prior to and after the well abandonment. Payment will be made at the hourly rate as bid.

**Item 6. Delay Time**

If work by the subcontractor is delayed for more than 30 minutes as a result of action by E & E, the subcontractor will be entitled to reimbursement for each delay in excess of 30 minutes. Both the subcontractor and E & E will jointly record and verify any such instances and the time involved in excess of 30 minutes. At the project completion, the subcontractor will be paid for the accumulated totals of these delays. Payment will be at the hourly rate as bid. This payment does not include time for difficult moving.

**Item 7. Difficult Moving Time**

This item will include only charges for time in excess of 30 minutes required to move equipment on and off the well location if access is judged to be more difficult than would normally encountered. Such an instance must also be jointly recorded by the subcontractor and E & E. Payment will be at the hourly rate as bid.

**EXHIBIT 2**  
**COST/PRICE DATA**

(b) (4)

(b) (4)

## **APPENDIX A**

### **STATEMENT OF MEDICAL FITNESS**

This is to confirm that the following employees may engage in field activities at the Tri-County Public Airport site in connection with the Subcontract Agreement between E & E and > \_\_\_\_\_, dated > \_\_\_\_\_, 1998, and that all of said employees are medically fit both to perform required field activities and to utilize respiratory equipment in accordance with 29 CFR, Part 1910 and

(b) (4)

## **APPENDIX B**

### **STATEMENT OF HEALTH AND SAFETY TRAINING**

This is to confirm that the following employees may engage in field activities at the Tri-County Public Airport site in connection with the scope of work provided by E & E, dated > \_\_\_\_\_, 1998, and that all of said employees are trained in the health and safety aspects addressed in 29 CFR 1910. 120 and other applicable state and federal regulations. This includes an approved 40 hour health and safety training program and any required yearly update training.

(b) (4)

(b) (4)

(b) (4)

## **APPENDIX D**

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### **Levels of Personnel Protection**

## **LEVELS OF PERSONNEL PROTECTION**

### **LEVEL A**

1. MSA 401 self-contained breathing apparatus
2. East Wind CP2000 encapsulating suit
3. White cotton coveralls
4. Cotton underwear
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber or PVC booties
8. Disposable gloves\* (additional pair)
9. Disposable booties\* (additional pair)
10. Hard hat\*
11. Cool pack\*

### **LEVEL B**

1. MSA 401 self-contained breathing apparatus
2. Butyl rubber apron, ankle length with sleeves
3. Butyl rubber or neoprene gloves
4. Surgical gloves
5. Neoprene boots with steel toe and shank
6. Butyl rubber booties
7. Chemical-resistant coveralls
8. Cotton underwear
9. Disposable booties\* (additional pair)

10. Disposable gloves\* (additional pair)
11. Hard hat with face shield\*

#### **LEVEL C**

1. MSA Ultra-Twin cartridge respirator
2. Robertshaw escape mask
3. Butyl rubber gloves
4. Butyl rubber apron, ankle length with sleeves
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber booties
8. Chemical-resistant coveralls
9. Cotton underwear
10. Disposable booties\* (additional pair)
11. Disposable gloves\* (additional pair)
12. Hard hat with face shield\*

#### **LEVEL D**

1. Cotton coveralls
2. Cotton underwear
3. Safety boots/shoes
4. Safety glasses
5. Hard hat with optional face shield
6. Ultra-Twin cartridge respirator (readily available)
7. Robertshaw escape mask (readily available)

## **8. Work gloves**

**NOTE:** E & E guidelines may at times exhibit minor modifications to U.S. EPA criteria.

**\* Optional**

**EXHIBIT 3**  
**INSURANCE REQUIREMENTS**

It is expressly understood and agreed that before work is actually commenced, Subcontractor and Sub-subcontractor, if any, unless expressly relieved of the insurance requirements specified below in writing by Ecology and Environment, Inc., (E & E), shall subscribe for and maintain in full force and effect during the progress of the work, the following minimum insurance coverage:

- A. Workers' Compensation and Employers' Liability insurance coverage in amounts sufficient to satisfy state law.
- B. Comprehensive General Liability insurance covering bodily injury in an amount of not less than \$1,000,000 per occurrence.
- C. Comprehensive General Liability insurance covering broad form property damage in an amount of not less than \$1,000,000 per occurrence.
- D. Professional Liability insurance in the amount of \$1,000,000 per occurrence.

Note: These certificates, with the exception of Workers' Compensation and Employers' Liability, shall specify Ecology and Environment, Inc. as additional insured and all shall require thirty (30) days prior notice of cancellation of coverage to E & E. Notice to E & E and E & E's written approval shall similarly be required where insurance coverages are decreased or other material change in coverage occurs.

Certificates shall be forwarded to:

Denise L. Goulding  
Ecology and Environment, Inc.  
368 Pleasant View Drive  
Lancaster, New York 14086

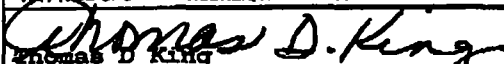
<b>ACORD CERTIFICATE OF LIABILITY INSURANCE</b>		POLICY ID NO <b>AQUAD-1</b>	DATE (MM/DD/YY) <b>06/29/99</b>
<b>PRODUCER</b>  Millhiser Smith Agency, Inc. 3100 Oakland Road N.E. Cedar Rapids IA 52402 Phone: 319-365-8611 Fax: 319-365-6919		THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
<b>INSURED</b>  Aquadrill Inc 717 E Second Avenue Coralville IA 52241		<b>INSURERS AFFORDING COVERAGE</b>	
		INSURER A: <b>Continental Western Insurance</b>	
		INSURER B: <b>Gulf Underwriters Ins Co</b>	
		INSURER C:	
		INSURER D:	
		INSURER E:	

### COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY	9QQ49	04/15/99	04/15/00	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire) \$ 100,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person) \$ 5,000
					PERSONAL & ADV INJURY \$ 1,000,000
					GENERAL AGGREGATE \$ 2,000,000
					PRODUCTS - COMPROP AGG \$ 2,000,000
GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC					
A	AUTOMOBILE LIABILITY	9QQ49	04/15/99	04/15/00	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS				
<input type="checkbox"/> NON-OWNED AUTOS					
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$
	<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC \$
					AUTO ONLY: AGG \$
A	EXCESS LIABILITY	9QQ49	04/15/99	04/15/00	EACH OCCURRENCE \$ 2,000,000
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE \$ 2,000,000
	<input type="checkbox"/> DEDUCTIBLE				\$
	<input type="checkbox"/> RETENTION \$				\$
					\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	9QQ49	04/15/99	04/15/00	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
	E.L. EACH ACCIDENT \$ 100000				
	E.L. DISEASE - EA EMPLOYEE \$ 100000				
	E.L. DISEASE - POLICY LIMIT \$ 500000				
B	OTHER	GUO466682	05/02/99	05/02/00	
	Contractors Pollution Liability				Per Claim \$1,000,000
		CPL/OCCURRENCE FORM			Aggregate \$1,000,000

DESCRIPTION OF OPERATIONS/LOCATION/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

<b>CERTIFICATE HOLDER</b> N	<b>ADDITIONAL INSURED; INSURER LETTER:</b>	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.
<b>ECOLOGY</b>  Ecology and Environment Inc 6405 Metcalf Bldg #3 Suite 404 Overland Park KS 66202		 Thomas D. King

ACORD 25-S (7/97)

ACORD CORPORATION 1988

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)



## **ecology and environment, inc.**

International Specialists in the Environment

Cloverleaf Building 3, 6405 Metcalf  
Overland Park, Kansas 66202  
Tel: (913) 432-9961, Fax: (913) 432-0670

June 1, 1999

Gene Pierce  
Midwest Metals, Inc.  
P.O. Box 4050  
Davenport, Iowa 52808

Dear Mr. Pierce:

Ecology & Environment, Inc. (E & E) is under contract to the United States Environmental Protection Agency (EPA) as a technical and management services contractor in support of the EPA's site assessment activities. In support of this activity, E & E has been assigned the task of properly abandoning a monitoring well installed in 1984 during an investigation of adjacent R.V. Hopkins facility.

The EPA On-Scene Coordinator is Scott Hayes (913-551-7670). The E & E Project Manager assigned to this ESI/RI is Jeff Gadt (913-432-9961). As discussed during our phone conversation, E & E will initiate the plugging activities at MW-4 on or near June 29, 1999. The disturbance to the property will be minimal, and will not affect your land use.

E & E has been requested by EPA to obtain permission conduct this activity on your property. An EPA consent agreement to allow EPA and their representatives property access is attached (Attachment 1). Please complete and sign the agreement and return it to me as soon as possible. A self-addressed envelope is enclosed for your convenience and a copy is provided for your records.

I will call you in advance to give you a more detailed schedule of my arrival. If you have any questions or comments regarding this manner, please feel free to contact either myself or the EPA Site Manager.

Sincerely,  
ECOLOGY AND ENVIRONMENT, INC.

Jeff W. Gadt  
Project Manager

## CONSENT FOR ACCESS TO PROPERTY

The person signing below gives permission to the U.S. Environmental Protection Agency (EPA) and its authorized representatives to enter onto the property described below for the purpose of properly abandoning an EPA-installed monitoring well (MW-4) located on Midwest Metals, Inc. property.

Permission is granted to the EPA, its contractors and subcontractors, as well as their employees, agents, and other designated representatives of EPA, to enter this property in order to carry out abandonment activities pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601-9675. I understand that field work is scheduled to begin in on or near June 29, 1999, and will continue for no more than 1 to 2 days.

I understand the EPA will restore my property as nearly as possible to its original condition after completion of the abandonment activities.

This permission is being granted by or on behalf of the (check one):

☐ owner      ☐ tenant      ☐ Designated Representative

of this property.

### ACCESS IS GRANTED FOR:

Property Address: Midwest Metals, Inc., 2060 West River Drive, Davenport, Iowa

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

Printed Name: \_\_\_\_\_

## CONSENT FOR ACCESS TO PROPERTY

The person signing below gives permission to the U.S. Environmental Protection Agency (EPA) and its authorized representatives to enter onto the property described below for the purpose of properly abandoning an EPA-installed monitoring well (MW-4) located on Midwest Metals, Inc. property.

Permission is granted to the EPA, its contractors and subcontractors, as well as their employees, agents, and other designated representatives of EPA, to enter this property in order to carry out abandonment activities pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601-9675. I understand that field work is scheduled to begin in on or near June 29, 1999, and will continue for no more than 1 to 2 days.

I understand the EPA will restore my property as nearly as possible to its original condition after completion of the abandonment activities.

This permission is being granted by or on behalf of the (check one):

☐ owner

☒ tenant

☐ Designated Representative

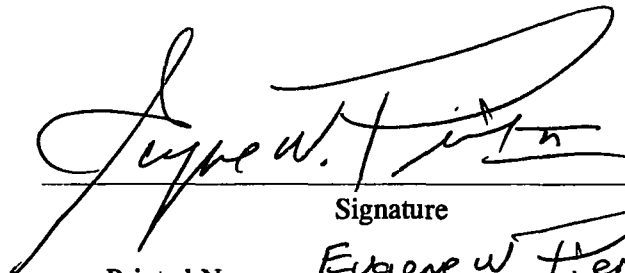
of this property.

### ACCESS IS GRANTED FOR:

Property Address: Midwest Metals, Inc., 2060 West River Drive, Davenport, Iowa

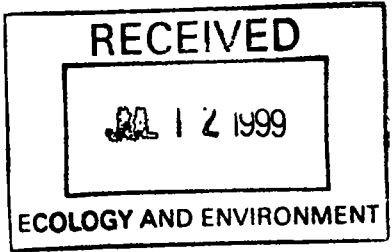
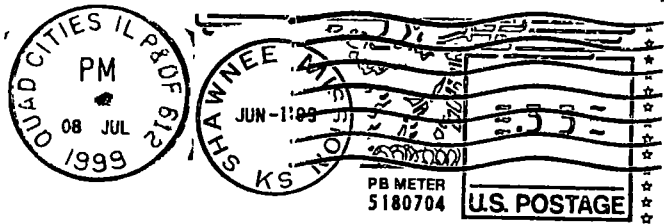
6-25-99

Date

  
Signature

Printed Name: Eugene W. Pierce

MIDWEST Metals, Inc.  
P.O. Box 4050  
Davenport, Iowa  
52806



Ecology & Environment  
ATTN: Jeff Gadt  
6405 Metcalf, Ste. 404  
Overland Park, KS  
66202



**PUBLICATION TRACKING FORM**  
(To Be Completed By Project Manager/Author)

PROJECT TITLE/SITE NAME: RV Hopkins Site JOB NO.: K57104  
 PROJECT MANAGER/AUTHOR: Jeff Galt TDD NO.: 507-9902-009  
 PROJECT DIRECTOR/STARTL: Bob Overfelt PAN NO.: 1166 RVS FXX  
 TECHNICAL EDITOR: \_\_\_\_\_ NATURE OF DOCUMENT: will Abandon A subcontract  
 PEER REVIEWER: \_\_\_\_\_ WORD PROCESSOR: \_\_\_\_\_  
 GRAPHICS: \_\_\_\_\_ DUE DATE: \_\_\_\_\_

STEP	LIST ALL REVIEWERS/WORD PROCESSORS IN PREFERRED SEQUENCE	DATE SUBMITTED	DATE REQUIRED	REVIEWED BY/TYPED BY	
				INITIALS	DATE
1	Bob Overfelt			RCO	5-28-99
2	Jeff Galt			JG	6-1-99
3					
4					
5					
6					
7					
8					
9					
10					

**PREFERRED FINAL APPROVAL STEPS**

11	Project Director/STARTL Approval			RCO	6-2-99
12	Word Processor/Finalize/Format/Put on Letterhead				
13	Project Director/STARTL Sign-off (Gives to support staff to make copies)				
14	Word Processor Sign-off (Copies and Sends Out)				

**PRIORITY LEVEL:**

Please circle appropriate number and initial in the space provided.

1+

1  
RCO

2

3

**SPECIAL INSTRUCTIONS:**

AOC Description Attached?

STARTL/ASTARTL Initials (Draft AOC)?

Spell Check? Dates?

Copies Made? Number?

Other Instructions:

**DATE FILED:**

**MONITORING WELL ABANDONMENT**

**STATEMENT OF WORK**

**for the**

**R. V. Hopkins Site**

**Davenport, Iowa**

**TDD #: S07-9905-017**

**PAN #: 1264RVTZXX**

**Project Manager: Jeff Gadt**

**Prepared By:**

**Ecology and Environment, Inc.  
Superfund Technical Assessment and Response Team (START)**

6405 Metcalf  
Building 3, Suite 404  
Overland Park, Kansas 66202  
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## 1.0 INFORMATION TO BIDDERS

Questions regarding specific aspects of the work to be performed should be directed to the attention of the E & E START project manager, (b) (4) and questions concerning contract procedures should be addressed to the E & E Subcontractors Manager (b) (4)

A minimum of two subcontractor personnel are required to perform this job task. Prior to the commencement of work E & E will conduct a site orientation and safety session. This session will be held at the site or at a mutually agreeable location. It is the subcontractor's responsibility to have enough personnel present at the training session to adequately cover any unanticipated crew member changes. Coordination and scheduling of the meeting will be with the above named E & E START project manager.

Access to the property will be arranged by E & E prior to commencement of the project. All subcontractor personnel must coordinate entry onto the site with E & E. Access to the well locations can be gained by conventional vehicles.

E & E will measure the static water levels and calculate the approximate volumes of materials required to seal the monitoring well prior to the start of work.

The present schedule calls for mobilization of equipment and personnel on-site by June 29, 1999. At this time the subcontractor must have the appropriate personnel and all equipment necessary to complete the job on-site. Access to clean potable water will be the responsibility of the subcontractor. In addition, electricity may not be available on-site and the provision of generators is the responsibility of the subcontractor.

## **STATEMENT OF WORK**

Under the Superfund Technical Assessment and Response Team (START) contract with the United States Environmental Protection Agency (EPA), Ecology and Environment (E & E) has been tasked to abandon one (1) two-inch PVC monitoring well, which was installed as part of a site investigation of the adjoining R. V. Hopkins site in Davenport, Iowa (Figures 1 and 2). The abandonment procedures will be in accordance with requirements of the state of Iowa.

## 2.0 BACKGROUND

The monitoring well (MW-4) was installed in June 1984 on the Midwest Metals, Inc. property as part of a 5-well ground water monitoring system for the R. V. Hopkins site, which is located on the adjoining property to the west. These properties are located in Davenport, Iowa, near the Mississippi River. The monitoring wells were installed during an EPA site investigation to determine if the ground water in the area had been impacted by wastes generated at this drum recycling site (R. V. Hopkins). A previous EPA inspection and limited sampling event at the R. V. Hopkins site indicated the potential for off-site migration of contaminants generated from on site waste disposal practices. MW-4 has an approximate depth of 15 feet, with a screened interval from 5 to 15 feet. The analytical results of sampling conducted in June 1984 revealed the presence of volatile organic compounds (VOCs) in the wells. In MW-4, chloroform and trans-1,2-dichloroethane were detected at concentrations of 15  $\mu\text{g/L}$  and 5.5  $\mu\text{g/L}$ , respectively. Because of apparent frost heave damage to MW-4, EPA has been asked to properly abandon the well.

### 3.0 SCOPE OF WORK

The subcontractor is to furnish all materials, equipment and labor necessary for the abandonment of one (1) two-inch monitoring well in accordance with Iowa Department of Natural Resources (IDNR) regulations as found in 567-39.8(455B)(3) Abandoned Well Plugging Procedures Class 2 wells.

#### 3.1 WELL SEALING

The subcontractor will backfill the well with “sealing materials”, neat cement/bentonite grout, to four feet below the ground surface. Neat cement bentonite (94 lb. bag of Portland cement, 5% bentonite, and 6 gallons of clean water) grout will be placed using a tremie pipe. The tremie pipe will remain a minimum of two feet below the top of the pour at all times and be retracted slowly as the well is filled from the bottom to the top. Assume the well is 15 feet deep.

#### 3.2 WELLHEAD REMOVAL/RESTORATION

The subcontractor will remove and dispose of the well protection materials (concrete well pads, protective casing, etc) and excavate soil to expose the casing to a depth of four feet below ground surface. The PVC casing pipe will be removed/cut to a depth of four feet below the ground surface and should be capped with a minimum of one foot of neat cement. The cap will extend six or more inches beyond the outside diameter of the remaining well casing and will terminate three feet below ground surface. **As an alternative, the subcontractor has the option of pulling out the entire well casing and screen and sealing the borehole prior the emplacement of the neat cement cap.**

The remaining three feet will then be backfilled with native soil and graded so that surface water is directed away from the abandoned well location. Grass sod, if necessary to conform to the surrounding landscape, will be placed over the area and watered. Restoration will be complete when conducted to the satisfaction and approved by the E & E project manager.

### **3.3 DECONTAMINATION**

Prior to and after the well abandonment, all equipment shall be thoroughly cleaned to remove all oil, grease, mud, tar, etc. This cleaning process shall consist of the following:

- 1) A hot water cleaning with a low sudsing-detergent (i.e., Alconox).
- 2) A tap water rinse.

E & E personnel will inspect all equipment to insure sufficient cleaning. The subcontractor must provide all equipment necessary for this cleaning process.

### **3.4 HEALTH AND SAFETY**

Because the site is listed as a hazardous waste site, all subcontract personnel must have the 40-hour OSHA certification. The subcontractor will prepare and submit to E & E a site specific Health and Safety Plan detailing all tasks to be performed prior to initiation of the field activities.

E & E anticipates that all work will be performed in Level D personal protection, which will consist of coveralls and steel toed boots.

#### **4.0 COST/PRICE DATA**

The quantities and items stated on the attached bid sheet are E & E's best approximations of the scope of work and are for the specific purpose of comparing bids. E & E does not guarantee that the bid quantities are correct or that stated tasks will be performed. E & E reserves the right to vary the quantities or delete items in their entirety, and the subcontractor will not be entitled to any extra payment, over the rates bid, due to such amended quantities or deleted items. However, at this time every item discussed is expected to be performed under this contract.

Only bids for the entire scope of work will be accepted.

The following documentation must accompany the completed bid sheets:

1. A letter addressing the following items:
  - a. An estimate of the number of days required to complete the well abandonment.
  - b. The earliest date the subcontractor can mobilize after award of the bid.
  - c. The names of at least three references, which E & E may contact.
  - d. The type and make of equipment to be used.
2. Proof of minimum insurance coverage.
3. The completed Representations and Certifications Regarding Subcontractor status form.
4. Signed copies of the attached statement of Health and Safety Training and the attached statement of Medical Fitness.

Bids for the well abandonment shall be received by E & E at 6405 Metcalf Ave., Cloverleaf Building 3, Suite 404, Overland Park, Kansas 66202-3958 no later than 5:00 PM on June 11, 1999. The bid package will be enclosed in an envelope which will have the following marking on the lower left-hand corner: Bid for: R.V. Hopkins site, TDD: S07-9905-017/PAN: 1264RVTZXX, ATTN: Jeff Gadt.

The authorization for the selected bidder to proceed with the work will be under a subcontract issued by E & E. A unit price, time and materials type contract, with provisions for designated lump sum items, will be implemented.

The bid must be reviewed by E & E and EPA who reserve the right to accept the bid most advantageous to the completion of the work or to reject any or all bids, as they may determine in their sole and absolute discretion, and to proceed no further in this matter.

## **5.0 BID ITEMS**

### **Item 1. Mobilization and Demobilization**

This item will carry all charges incidental to equipment set-up and removal, in order that the charges need not be distributed among the more variable items of the contract. This item will be paid at the contract lump sum price for mobilization and demobilization and will include the furnishing of personnel, machinery, tools and all other equipment necessary to carry on and complete the work properly. All material and equipment furnished under this item will remain the property of the subcontractor and will be maintained, cared for, and disposed of by the subcontractor.

### **Item 2. Well Abandonment**

This item will include all materials (cement, bentonite, etc) and labor costs for providing two personnel on-site to abandon one 15 foot deep 2-inch PVC monitoring wells. Abandonment will include all tasks discussed in Section 2: Scope of Work. Payment for this item will be made at the hourly rate as bid. It is estimated that the abandonment will require a maximum of 4 hours.

### **Item 3. Site Restoration**

This item will include all charges incidental to the restoration of each well site including restoring the original grade, maintaining a slight slope over the original well location and re-sodding the wellhead location. Payment for this item will be made as a lump sum for the one location.

### **Item 4. Material Disposal**

This item will carry charges for the disposal of the removed well protection materials (concrete well pads, protective covers, etc) at the municipal landfill. Payment will be made as a lump sum for all materials.

**Item 5. Decontamination Time**

This item will include all charges for labor and equipment necessary to decontaminate the well abandonment equipment prior to and after the well abandonment. Payment will be made at the hourly rate as bid.

**Item 6. Delay Time**

If work by the subcontractor is delayed for more than 30 minutes as a result of action by E & E, the subcontractor will be entitled to reimbursement for each delay in excess of 30 minutes. Both the subcontractor and E & E will jointly record and verify any such instances and the time involved in excess of 30 minutes. At the project completion, the subcontractor will be paid for the accumulated totals of these delays. Payment will be at the hourly rate as bid. This payment does not include time for difficult moving.

**Item 7. Difficult Moving Time**

This item will include only charges for time in excess of 30 minutes required to move equipment on and off the well location if access is judged to be more difficult than would normally encountered. Such an instance must also be jointly recorded by the subcontractor and E & E. Payment will be at the hourly rate as bid.

## BID ESTIMATE SHEET

### BID ITEM

1	Mobilization and Demobilization . . . . .	Lump Sum	= \$	_____
2	Well Abandonment . . . . .	\$_____ /Hr. X 4 Hours	= \$	_____
3	Site Restoration . . . . .	Lump Sum	= \$	_____
4	Material Disposal . . . . .	Lump Sum	= \$	_____
5	Decontamination Time . . . . .	\$_____ /Hr. X 1 Hours	= \$	_____
6	Delay Time . . . . .	\$_____ /Hr. X 1 Hours	= \$	_____
7	Difficult Moving Time . . . . .	\$_____ /Hr. X 1 Hours	= \$	_____
TOTAL BID. . .Add Items 1-7 . . . . .			\$	_____
				(Total)

COMPANY: \_\_\_\_\_ License #: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

SIGNATURE/TITLE OF AUTHORIZED COMPANY REPRESENTATIVE:

\_\_\_\_\_

Date: \_\_\_\_\_

## **APPENDIX A**

---

### **Statement of Medical Fitness**

## **APPENDIX A**

### **STATEMENT OF MEDICAL FITNESS**

This is to confirm that the following employees may engage in field activities at the Tri-County Public Airport site in connection with the Subcontract Agreement between E & E and > \_\_\_\_\_, dated > \_\_\_\_\_, 1998, and that all of said employees are medically fit both to perform required field activities and to utilize respiratory equipment in accordance with 29 CFR, Part 1910 and "U.S. EPA Standard Operating Safety Guides", 1094.

> \_\_\_\_\_

> \_\_\_\_\_

> \_\_\_\_\_

> \_\_\_\_\_

> \_\_\_\_\_

\_\_\_\_\_  
Authorized Subcontractor Representative

## **APPENDIX B**

---

### **Statement of Health and Safety Training**

## **APPENDIX B**

### **STATEMENT OF HEALTH AND SAFETY TRAINING**

This is to confirm that the following employees may engage in field activities at the Tri-County Public Airport site in connection with the scope of work provided by E & E, dated > \_\_\_\_\_, 1998, and that all of said employees are trained in the health and safety aspects addressed in 29 CFR 1910. 120 and other applicable state and federal regulations. This includes an approved 40 hour health and safety training program and any required yearly update training.

**NAME OF ON-SITE PERSONNEL**

**TITLE**

> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_

> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_  
> \_\_\_\_\_

\_\_\_\_\_  
Authorized Subcontractor Representative

\_\_\_\_\_  
Date

## **APPENDIX C**

---

### **Representation and Certification Regarding Subcontractor Status**

## **REPRESENTATIONS AND CERTIFICATIONS REGARDING SUBCONTRACTOR STATUS**

### **1. SMALL BUSINESS CERTIFICATION**

- A. The offeror/contractor certifies that it is ☐, is not ☐, a small business concern as defined in accordance with Section 3 of the Small Business Act (15 U.S.C. 632).
- B. "Small Business Concern" as used in this offer means a concern, including its affiliates, that is independently owned and operated, is not dominant in the field of operation in which it is bidding on Government contracts, and is qualified as a small business under the criteria and size standards set forth in 13 CFR 121 or FAR Part 19.

### **2. SMALL DISADVANTAGED BUSINESS CERTIFICATION**

The offeror/contractor certifies that it is a small business concern (as set forth in 1. above) *and* is ☐, is not ☐, owned and controlled by socially and economically disadvantaged individuals.

- A. Socially and economically disadvantaged individuals are defined as:
  - 1. United States citizens who are Black Americans, Hispanic American, Native Americans (Indian Tribes, Eskimos, Native Hawaiians), Asian-Pacific Americans, Subcontinent Asian Americans, or other specified minorities.
  - 2. Any other individual found to be disadvantaged pursuant to Section 8(a) of the Small Business Act (15 U.S.C. 637).
  - 3. Any other individual defined as socially, and economically disadvantaged, for purposes relating to other sections of the Small Business Act.
- B. A small disadvantaged business concern is defined as one:
  - 1. Which is at least 51 percent owned by one or more such individuals or, in the case of publicly owned business, at least 51 percent of the stock is owned by individuals defined in A above.
  - 2. Whose management and daily business operations are controlled by one or more such individuals.
  - 3. Which provides certification concerning said ownership and control.

### **3. WOMEN-OWNED SMALL BUSINESS CERTIFICATION**

The offeror/contractor certifies that it is ☐, is not ☐, a woman-owned small business concern. "Woman-owned" as used in this offer means a small business (defined above) that is at least 51 percent owned, controlled, and operated by a woman or women who are US citizens. "Controlled" is defined as

exercising the power to make policy decisions. "Operated" is defined as actively involved in the day-to-day management.

#### **4. LABOR SURPLUS AREA CONCERNS**

For the purpose of identifying work which will be performed in labor surplus areas, we stipulate the intended principal source of labor for the work described in this offer is:

_____		
Street Address		
_____		
City	County	State

#### **5. RURAL AREA SMALL BUSINESS CERTIFICATION**

The offeror represents that it is ☐, is not ☐, a rural area small business concern. Rural area small business as used in this provision, means a small business concern that is located and conducts its principal operations in a rural geographic area (county or parish) listed in the Small Business Administration's Listing of Non-Metropolitan Rural Counties by State.

The offeror certifies that the information provided above is true and accurate.

FIRM \_\_\_\_\_

SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_  
(Authorized Representative)

DATE \_\_\_\_\_

## **APPENDIX D**

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### **Levels of Personnel Protection**

## **LEVELS OF PERSONNEL PROTECTION**

### **LEVEL A**

1. MSA 401 self-contained breathing apparatus
2. East Wind CP2000 encapsulating suit
3. White cotton coveralls
4. Cotton underwear
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber or PVC booties
8. Disposable gloves\* (additional pair)
9. Disposable booties\* (additional pair)
10. Hard hat\*
11. Cool pack\*

### **LEVEL B**

1. MSA 401 self-contained breathing apparatus
2. Butyl rubber apron, ankle length with sleeves
3. Butyl rubber or neoprene gloves
4. Surgical gloves
5. Neoprene boots with steel toe and shank
6. Butyl rubber booties
7. Chemical-resistant coveralls
8. Cotton underwear
9. Disposable booties\* (additional pair)

10. Disposable gloves\* (additional pair)
11. Hard hat with face shield\*

### **LEVEL C**

1. MSA Ultra-Twin cartridge respirator
2. Robertshaw escape mask
3. Butyl rubber gloves
4. Butyl rubber apron, ankle length with sleeves
5. Surgical gloves
6. Neoprene boots with steel toe and shank
7. Butyl rubber booties
8. Chemical-resistant coveralls
9. Cotton underwear
10. Disposable booties\* (additional pair)
11. Disposable gloves\* (additional pair)
12. Hard hat with face shield\*

### **LEVEL D**

1. Cotton coveralls
2. Cotton underwear
3. Safety boots/shoes
4. Safety glasses
5. Hard hat with optional face shield
6. Ultra-Twin cartridge respirator (readily available)
7. Robertshaw escape mask (readily available)

**8. Work gloves**

**NOTE: E & E guidelines may at times exhibit minor modifications to U.S. EPA criteria.**

**\* Optional**

**APPENDIX E**

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**Sample Subcontract**

SUBCONTRACT AGREEMENT  
DRILLING SERVICES  
ECOLOGY AND ENVIRONMENT, INC.

AND  
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM (START)  
AND

TDD NO.  
PAN

AGREEMENT, entered into and made effective as of the \_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
by and between ECOLOGY AND ENVIRONMENT, INC., a New York corporation, with  
headquarters at 368 Pleasant View Drive, Lancaster, New York 14086 (hereafter, "E & E"),  
Superfund Technical Assessment and Response Team (START), and , with  
offices at , (hereafter, the "Subcontractor").

W I T N E S S E T H:

WHEREAS, Ecology and Environment, Inc., with headquarters at 368 Pleasant View,  
Lancaster, New York 14086, and a business office at 6405 Metcalf Avenue, Cloverleaf Building  
3, Suite 404, Overland Park, Kansas, 66202, has entered into a contract (Contract No. 68-W6-  
0012) with the United States Environmental Protection Agency (EPA), with an effective date of  
December 18, 1995, to furnish technical, engineering and managerial services in support of  
EPA's Emergency Response, Removal, and Prevention Programs within EPA Region VII; and

WHEREAS, E & E, desires to subcontract a portion of its work to the Subcontractor;  
and

WHEREAS, the Subcontractor agrees to provide such subcontract services in  
accordance with the terms stated herein.

NOW, THEREFORE, in consideration of the mutual covenants, premises, conditions  
and terms to be kept and performed, the parties hereto agree as follows:

GENERAL TERMS

### 1. EMPLOYMENT

E & E hereby agrees to engage the Subcontractor, and the Subcontractor hereby agrees to perform the services as provided for herein, and as set forth in Exhibit 1, annexed hereto and made a part hereof, in connection with the program.

### 2. SCOPE OF WORK

The services to be provided by the Subcontractor for and on behalf of E & E shall be those specified in Exhibit 1, annexed hereto and made a part hereof. All services are for the purpose of supporting and assisting E & E in furnishing technical and managerial services to the EPA under the Contract. The Subcontractor shall furnish the necessary personnel, material, and service facilities (except as may be otherwise specified herein), and shall otherwise do all things necessary for or incident to the performance of the work specified in Exhibit 1, and any references contained therein.

### 3. CONTRACT DOCUMENTS AND ORDER OF PREFERENCE

A. This agreement consists of the following documents:

- (1) This Subcontract Agreement dated as of the effective date written above, with attached Exhibits.
- (2) The additional general provisions required by the prime Contract, which are hereby incorporated by reference as follows:

<u>FAR Clause Number</u>	<u>Clause Title and Application</u>
52.202-1	DEFINITIONS
52.203-1	OFFICIALS NOT TO BENEFIT
52.203-3	GRATUITIES
52.203-5	COVENANT AGAINST CONTINGENT FEES
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT
52.203-7 52.209-6	ANTI-KICKBACK PROCEDURES (If over \$100,000) PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED OR PROPOSED FOR DEBARMENT

<u>FAR Clause Number</u>	<u>Clause Title and Application</u>
52.215-1	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (Negotiated Contracts over \$10,000)
52.215-2	AUDIT -- NEGOTIATION (Negotiated Contracts over \$25,000)
52.215-22	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (Negotiated Contracts over \$25,000)
52.215-24	SUBCONTRACTOR COST OR PRICING DATA (Negotiated Contracts over \$100,000)
52.215-26	INTEGRITY OF UNIT PRICES (If over \$25,000)
52.215-27	TERMINATION OF DEFINED BENEFIT PENSION PLANS
52.215-33	ORDER OF PRECEDENCE
52.215-39	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS
52.215-40	NOTIFICATION OF OWNERSHIP CHANGE
52.216-7	ALLOWABLE COST AND PAYMENT (If over \$25,000)
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS
52.219-9	SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN
52.219-13	UTILIZATION OF WOMEN OWNED SMALL BUSINESSES
52.219-16	LIQUIDATED DAMAGES - SMALL BUSINESS SUBCONTRACTING PLAN
52.220-3	UTILIZATION OF LABOR SURPLUS AREA CONCERNS
52.222-3	CONVICT LABOR
52.221-21	CERTIFICATION OF NONSEGREGATED FACILITIES
52.222-22	PREVIOUS CONTRACTS AND COMPLIANCE REPORTS
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.222-26	EQUAL OPPORTUNITY

<u>FAR Clause Number</u>	<u>Clause Title and Application</u>
52.222-35	AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS (If over \$10,000)
52.222-36	AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (If over \$2,500)
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA
52.223-2	CLEAN AIR AND WATER (If over \$100,000)
52.223-3	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA
52.223-6	DRUG-FREE WORKPLACE
52.225-11	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	AUTHORIZATION AND CONSENT
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
52.227-17	RIGHTS IN DATA - SPECIAL WORKS
52.230-2	COST ACCOUNTING STANDARDS (Negotiated Contracts over \$100,000)
52.230-3	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES
52.230-5	ADMINISTRATION OF COST ACCOUNTING STANDARDS
52.242-13	BANKRUPTCY
52.243-3	CHANGES - TIME AND MATERIALS
52.244-3	SUBCONTRACTS
52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME AND MATERIAL, OR LABOR-HOUR CONTRACTS)
52.246-6	INSPECTION
52.246-25	LIMITATION OF LIABILITY--SERVICES (If over \$25,000)
52.249-6	TERMINATION
52.249-14	EXCUSABLE DELAYS

EPAAR Clause Number	Clause Title
1552.235-70	SCREENING OF BUSINESS INFORMATION FOR CLAIMS OF CONFIDENTIALITY
1552.235-71	TREATMENT OF CONFIDENTIAL BUSINESS INFORMATION

- (3) Any special E & E "Terms and Conditions", to the extent such Terms are applicable, are identified as such, and are attached hereto.

B. In the general provisions listed above all references to the Contractor or E & E shall be deemed references to the subcontractor, and all references to the EPA or the Government shall be deemed reference to E & E.

C. In the event of any inconsistency in this Subcontract, the inconsistencies shall be resolved by giving precedence in the following order:

- (1) This Subcontract Agreement with attached Exhibits
- (2) The Additional provisions, approved protocols and procedures incorporated into this Subcontract by reference
- (3) The General Provisions of the Contract

4. PERIOD OF PERFORMANCE

The period of performance of this Subcontract shall be for a term of \_\_\_\_\_.

5. ESTIMATED COST

The total cost of this Subcontract is firm fixed unit price not to exceed \_\_\_\_\_ Dollars (\$ \_\_\_\_\_). No payments shall be made to the Subcontractor other than against a properly prepared and submitted invoice in accordance with Article 8 of this Subcontract.

6. PAYMENT FOR SERVICES

E & E shall pay the Subcontractor for the services performed in accordance with the Subcontractor's price schedule, annexed hereto as Exhibit 2 and made a part hereof, and in accordance with the provisions of this Subcontract. No invoice for such services shall include work in excess of forty (40) hours in any week, except as authorized in advance by the START Program Manager, or such other E & E employee(s) designated in writing by the START

Program Manager. Invoices shall be supported by documents, time sheets, itemized lists of material, or other documents as may be reasonably required by E & E. Notwithstanding anything in this Subcontract to the contrary, the Subcontractor shall be paid for services performed on behalf of E & E pursuant to this Subcontract within forty-five (45) days of receipt of a valid invoice by E & E for such services.

#### 7. SUBCONTRACTOR ACCOUNTING SYSTEM

The Subcontractor shall employ an accounting system for this agreement to identify and record site specific costs on a site specific activity basis. Site specific cost documentation must be readily retrievable and sufficiently identifiable to enable cross referencing with payment vouchers for purposes of cost recovery litigations.

#### 8. SUBMISSION OF CLAIMS FOR REIMBURSEMENT

In accordance with the provisions of this Subcontract, and the cost proposal/schedule at Exhibit 2 incorporated into and made a part hereof, each Subcontractor invoice or claim for reimbursement, along with any required supporting statements or certificates, shall be processed in accordance with the unit price schedule provided in Exhibit 2. Subcontractor invoices and claims shall be submitted to the attention of the START Financial Manager at the address designated below for subsequent submission to EPA.

Ecology and Environment, Inc.  
6405 Metcalf Avenue  
Cloverleaf Building 3, Suite 404  
Overland Park, Kansas 66202  
Attention: Edward J. Pfeiffer  
Phone: (913) 432-9961  
Fax: (913) 432-0670

E & E agrees to submit such claims promptly upon receipt thereof.

#### 9. TECHNICAL DIRECTION

The Subcontractor shall promptly perform all work directed by the E & E Region VII START Program Manager or his designated representative (Robert C. Overfelt/Project Manager) in accordance with the technical direction given by them which may include, but need not be limited to:

- (1) the anticipated level of effort to be devoted to each task;
- (2) the anticipated end product(s) of each task; and
- (3) the completion date for each task.

10. E & E START FINANCIAL MANAGER MODIFICATION OF SUBCONTRACT

Notwithstanding any of the provisions of this Subcontract, only the Region VII START Financial Manager is authorized to alter the scope of work set forth in Exhibit 1 of this Subcontract, or to amend or modify in any way any of the terms of the Subcontract.

11. AMENDMENTS IN WRITING

This Subcontract may be amended only by a further written agreement, duly executed, between the parties, and such amendment shall be subject to the prior approval of the Government. This Subcontract may not be changed orally.

12. NOTIFICATION OF CHANGES TO SUBCONTRACT

A. Definitions.

As used in this Article, the term "E & E START Financial Manager" does not include any representative of the E & E START Financial Manager, whether or not such representative is acting within the scope of his authority.

B. Notice.

The primary purpose of this Article is to obtain prompt reporting by the Subcontractor Contractor conduct which the Subcontractor considers to constitute a change to this Subcontract. Except for changes identified as such, the Subcontractor shall notify the E & E START Financial Manager promptly in writing, and in any event within ten (10) calendar days from the date the Subcontractor so identifies any Contractor conduct (including actions, inactions, and written or oral communications or changes in site conditions) that the Subcontractor regards as a change to the Subcontract terms and conditions. The notice shall state, on the basis of the most accurate information available to the Subcontractor, the following:

- (1) the date, nature and circumstance of the conduct regarded as a change;
- (2) the name, function, and activity of each individual, Contractor, and Subcontractor official or employee, involved in or knowledgeable of such conduct;
- (3) the identification of any document(s) and the substance of any oral communication involved in such conduct; and
- (4) the particular elements of contract performance for which the Subcontractor may seek an equitable adjustment under the "Changes" clause, including:

- (a) those portions of the Subcontract statement of work the Subcontractor believes will be affected by the alleged change;
- (b) the estimated adjustment to the Subcontract with respect to estimated cost and/or fixed fee, delivery or performance schedule; and other provisions affected by the alleged change.

C. Continued Performance

The Subcontractor shall not proceed with the alleged changes as identified in the notice required by B. above, unless notified in advance in writing by the E & E Region VII START Financial Manager, in accordance with D (1), below. Until such notification is received, the Subcontractor shall continue performance of this Subcontract in accordance with its terms and conditions.

D. E & E Response

The E & E Region VII START Financial Manager shall respond in writing to the notice required by B. above. In such response, the E & E START Financial Manager shall either:

- (1) confirm that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance in accordance with the "Changes" clause;
- (2) countermand any communication regarded as a change;
- (3) deny that the conduct of which the Subcontractor gave notice does constitute a change, and, when necessary, direct the mode of further performance; or
- (4) in the event the Subcontractor's notice information is deemed inadequate to enable the making of a response as set forth in (1), (2) or (3) above, advise the Subcontractor when additional information is required and establish the date by which such additional information is to be furnished.

E. Equitable Adjustments

If the E & E VII START Financial Manager confirms that E & E or Government conduct effected a change within the scope of the "Changes" clause, as alleged by the Subcontractor, and such conduct causes an increase or decrease in the estimated cost of, or the time required for the performance of, any part of the work under this Subcontract, whether changed or not changed by such conduct, an equitable adjustment may be made in accordance with the "Changes" clause of this Subcontract.

13. NOTICES

All notices and other communications required to be given under this Subcontract, and in the absence of specific direction otherwise, shall be deemed effectively made or given if written

and delivered to the appropriate party at the address listed below, or at such other address or addresses as either party may, from time to time designate in writing:

With respect to E & E:

Ecology and Environment, Inc.  
6405 Metcalf Avenue  
Cloverleaf Building 3, Suite 404  
Overland Park, Kansas 66202  
Attention: Robert C. Overfelt, START Program Manager

With respect to the Subcontractor:

Attention:

#### 14. COMPLIANCE WITH LAWS

Subcontractor shall comply with all applicable state, federal, and local laws and executive orders and regulations in the performance of its services hereunder.

#### 15. HEALTH AND SAFETY

##### A. General

Subcontractor acknowledges that it has a primary duty to prevent on the job accidents and to protect the health and safety of its employees. Subcontractor understands and acknowledges that this Subcontract will entail work at sites that pose potential exposure to hazardous materials and that such work is inherently dangerous. Subcontractor also understands that accidents, bodily injury, or property damage could result from human errors in judgement, mistakes, carelessness, forgetfulness, sloppiness, and work performed in haste. It is the duty and responsibility of the Subcontractor to train and supervise all its personnel and activities to prevent such occurrences. Subcontractor represents that it has the requisite corporate resources and expertise to perform the services hereunder.

##### B. Requirements

At a minimum, Subcontractor shall in all cases strictly comply with all relevant or applicable Federal, State, and local legal regulatory requirements, guidelines, and generally accepted procedures and standards of practices governing the physical and chemical hazards associated with the provision of said services, including the appropriate requirements set forth in 29 CFR Parts 1910 and 1926, including in particular, the provisions of 29 CFR 1910.120;

1910.132; 1910.133; and 1910.134. Subcontractor will also comply with any special requirements necessary to accommodate specific site conditions.

**C. Site Health and Safety Plans**

Subcontractor shall determine the necessary methods and means to accomplish the purposes of this Agreement and take all necessary measures to ensure that said purposes are achieved safely under its direction. Subcontractor agrees to submit to E & E its health and safety plan relating to site activities prior to commencement of work. Subcontractor further acknowledges that E & E bears no duty or legal responsibility to supervise Subcontractor personnel. Any advice or direction provided by E & E or the client shall not relieve Subcontractor or any of its employees of any obligations hereunder, unless such advice and direction is provided in writing to the Subcontractor, in accordance with paragraph 13 hereunder.

**D. Procedures**

Subcontractor agrees at a minimum to abide by all EPA safety and health programs and procedures while performing any on-site services in connection with this Agreement. Subcontractor further agrees to adhere to its Health and Safety Plan for site activities and understands and agrees that failure to do so may result in the shutdown of Subcontractor activities by E & E or the EPA and concurrently, the assumption by Subcontractor of legal responsibility for additional costs and damages pursuant to paragraph 33 of this Agreement. The Subcontractor further agrees to require any of its employees who are engaged in field work hereunder to submit to physical examinations and/or to comply with any health and/or medical program for preventative or remedial or other purposes, if and when required by the EPA.

**E. Medical Surveillance Program**

Each Subcontractor employee involved in field activities under this agreement should be enrolled in a medical surveillance program. The Subcontractor acknowledges that it is its sole responsibility to institute a medical surveillance program as required by 29 CFR 1910, including but not limited to 29 CFR 1910.120(f), and that the instituting of any such program shall be solely at its own expense. The Subcontractor agrees to submit to E & E a certification that each employee assigned to field operations on this project, is enrolled in a medical surveillance program, and has been medically certified by a physician for this work, including the use of a respirator. Certifications of employee medical status must be submitted to E & E before any employee shall be permitted to enter a hazardous waste site under this agreement. (See Medical Cert Form [H & S Training Cert Form].)

F. Hazardous Waste Operations Training Program

The Subcontractor shall arrange for and require that all of its employees who will be working on a hazardous waste site take a safety and health training course with annual refreshers which conform to the requirements specified in OSHA Regulations 29 CFR 1910.120(e). Certification of completion of such courses by each employee who is to work on site under this agreement shall be furnished to Ecology and Environment, Inc. prior to any such employee's entering the site for any purpose.

G. First Aid Training and CPR Training

The Subcontractor agrees that its employees will not enter any site under this agreement, unless a minimum of two field personnel are present on the site that are currently certified by the American Red Cross in both Multimedia First Aid and Cardiopulmonary Resuscitation (CPR)-Modular, or equivalent. These trained individuals need not be subcontractor employees.

H. Use of Equipment and Protective Clothing at Hazardous Waste Sites

The Subcontractor agrees that each employee shall wear such protective clothing and use such equipment as specified in the site Health and Safety Plan at all times when such employee is on the site. The Subcontractor hereby agrees to comply with the requirements set forth at 29 CFR 1910.134 including those provisions that require facial hair to be removed and/or special facepiece lenses to be utilized by persons with poor eyesight in the event respiratory equipment is to be used.

16. EQUAL EMPLOYMENT OPPORTUNITY

The provisions of the clause contained in FAR Subpart 22.8 in effect on the date hereof are hereby incorporated herein by reference with the following change: The word "Contractor" shall mean "Subcontractor."

17. PROHIBITION AGAINST ASSIGNMENT -- SUBCONTRACTING

It is understood and agreed that the Subcontractor shall be an independent contractor and that the Subcontractor shall not further subcontract out any of the work to be performed by it under this subcontract nor assign said Subcontract without, in each case, the prior written consent of E & E and of the Government, if appropriate.

18. INCREMENTAL FUNDING

It is understood that E & E's Prime Contract is being incrementally funded. It is, therefore, understood that this Subcontract is funded only to the extent funds are available to pay for the

Subcontractor's services in accordance with the Contract, and that the Subcontractor will be paid only to the extent funds are available for allocation to the Subcontractor under the Contract. E & E shall notify the Subcontractor thirty (30) days in advance of any period for which the Prime Contract with the Government has not been funded.

19. CONSULTANT SERVICE

The Subcontractor agrees to determine and notify E & E whether or not it or any consultant to be utilized by it under this Subcontract has in effect an agreement with the Federal Government for similar services, and if so, will advise the E & E START Financial Manager accordingly.

20. FUTURE EXPERT CONSULTING SERVICES

It is recognized that, subsequent to performance under this subcontract, the need may arise to provide expert testimony during hearings, and/or court proceedings involving site specific activities or other matters, with regard to which personnel provided by the subcontractor under this contract would have gained expertise as a result of tasks performed under this contract. Therefore, the subcontractor agrees to make available expert consulting services in support of such future proceedings, and to enter into intent agreements as necessary with lower tier subcontractors (if any) to ensure the availability of such subcontractor personnel. Agreement to provide such services in the future serves as a notice of intent only. Such services are not purchased hereby, and will be obtained, as required, through a separate contractual agreement.

21. DESIGNATION OF PATENT ADVISOR

The E & E START Financial Manager is hereby designated to represent E & E in administering the "Patents and Inventions" clause in this Subcontract. Correspondence with respect to this clause should be directed to the E & E START Financial Manager. The requirements of the "Patents and Inventions" clause regarding the identification and mailing address of the E & E START Financial Manager in this Subcontract may be satisfied by including this entire paragraph.

22. FEDERAL REPORTS ACT

In the event that it subsequently becomes a requirement of this Subcontract to collect identical information from ten (10) or more public respondents, the Federal Reports Act, 44 USC 3501, et seq., shall apply to this Subcontract. In such event, the Subcontractor shall not expend any funds to, or take any other action whatsoever, to solicit information from any of the public

respondents until the EPA Contracting Officer has notified E & E in writing that the required Office of Management and Finance final clearance has been obtained, and E & E has so notified the Subcontractor. The Subcontractor shall provide to the EPA Contracting Officer, and the E & E START Financial Manager, such information as will facilitate obtaining such clearance.

23. SUBCONTRACT CONSENT

This Subcontract, and all amendments thereto, are subject to the prior approval of the EPA Contracting Officer, as provided for in the clause of the General Provisions entitled, "Subcontracts".

24. ORGANIZATIONAL CONFLICT OF INTEREST

A. The Subcontractor warrants that, to the best of its knowledge and belief, and except as otherwise set forth in this Subcontract, it does not have any organizational conflict of interest as defined in Paragraph B, below.

B. The term "Organizational Conflict of Interest" means a relationship exists whereby the Subcontractor (including its chief executives, directors, and proposed consultants) has interests which:

- (1) May diminish its capacity to give impartial, technically sound, and objective advice and assistance, or may otherwise result in a biased work product; or
- (2) May result in an unfair competitive advantage. Such interests include, but are not limited to, present or proposed contractual arrangements with an industry to be studied, present or proposed contractual agreements with a firm which manufactures or sells any substance or item to be studied, present or proposed manufacture or sale of any substance or item to be studied, and present or proposed manufacture or sale of any substance or item in competition with a substance or item to be studied under the proposed Subcontract. It is not relevant that the Subcontractor has either the reputation of being able to resist the temptation to give biased advice or the ability to resist such temptation.

C. The Subcontractor agrees that, if after the effective date of this Subcontract, it discovers an organizational conflict of interest with respect to this Subcontract, it shall make an immediate and full disclosure in writing to the E & E START Financial Manager, which disclosure shall include a description of the action which the Subcontractor has taken, or proposes to take, to avoid, eliminate or neutralize the conflict. E & E may, however, terminate this Subcontract for its convenience in the event of any organizational conflict of interest.

D. The Subcontractor agrees further that if a conflict of interest were identified prior to

the execution of this Subcontract, it will adequately avoid, eliminate or neutralize the conflict in a manner satisfactory to the E & E Region VII START Financial Manager.

E. In the event the Subcontractor was aware of an organizational conflict of interest any time prior to or after the execution to this Subcontract, and intentionally did not disclose the conflict to E & E, E & E may terminate the Subcontract for default, and E & E and/or the Government may invoke such other remedies as may be authorized by law.

## 25. CONFLICTS OF INTEREST REGARDING PERSONNEL

In addition to the requirements of Paragraph 24 Organizational Conflict of Interest, the following provision with regards to employee personnel performing under this subcontract shall apply.

The subcontractor agrees to immediately notify E & E's START Financial Manager of any actual, apparent, or potential personal conflicts of interest with regards to any subcontractor employee, or consultant working on or having access to information regarding this subcontract. A personal conflict of interest is defined as a relationship of an employee, or consultant with an entity that may impair the objectivity of the employee or consultant in performing the subcontract work. The subcontractor agrees to notify E & E's START Financial Manager prior to incurring costs for that employee's work where an employee may have a personal conflict of interest. In the event that the personal conflict of interest does not become known until after performance of the subcontract has begun, the Subcontractor shall immediately notify E & E START Financial Manager of the personal conflict of interest. The Subcontractor shall continue performance of this contract until notified by E & E's START Financial Manager of the appropriate action to be taken.

This paragraph shall apply to any subcontract or consultant agreement placed hereunder, except for subcontracts or consultant agreements for such services as well drilling, fence erecting, plumbing, utility hookups, security, electrical, or other similar services.

## 26. PROJECT EMPLOYEE CONFIDENTIALITY AGREEMENT

The subcontractor agrees to obtain confidentiality agreements from all personnel working on requirements under this contract. Such agreements shall contain provisions which stipulate that each individual agrees not to disclose either in whole or in part to any entity external to EPA, DOJ, or the contractor, any technical data provided by the Government or generated by the contractor, any site specific cost information, or any enforcement strategy without first obtaining

the written permission of E & E. Such agreements shall be effective for the period of performance of E & E's prime contract and for a period of two years after the expiration of this contract, including any amendments to extend the term of this contract.

27. INSPECTION AND ACCEPTANCE

The E & E START Financial Manager, or his duly authorized or designated representative, is authorized to perform inspection for acceptance and to accept materials and services to be provided.

28. F.O.B. POINT

All items and materials required hereunder shall be delivered F.O.B. Destination (e.g., Job Site), with all shipping and transportation costs prepaid.

29. TOOLS AND MATERIALS

Tools and materials necessary for Subcontractor's performance shall be supplied by Subcontractor. Any tools or materials supplied by E & E, or created from performance of the Agreement, shall remain the property of E & E, and will be returned on demand.

30. WORKING FILES The Subcontractor shall maintain accurate working files containing all work documentation including calculations, assumptions, interpretations of regulations, source of information, and other raw data required in the performance of this agreement. The Subcontractor shall provide the information contained in its working files to E & E upon request.

31. TECHNICAL DATA

The Subcontractor hereby agrees to deliver to the E & E START Financial Manager within thirty (30) days after being requested to do so by E & E, the following documents:

A. All originals and copies, and all abstracts and excerpts therefrom, of all information supplied to the Subcontractor by E & E and specifically designated "Confidential Business Information," pursuant to the article entitled "Treatment of Confidential Business Information."

B. All originals and copies, and all abstracts and excerpts therefrom, all information collected by the Subcontractor directly from a business or from a source that represents a business or businesses, such as a trade association, pursuant to the Article entitled "Screening of Business Information for Claims of Confidentiality."

C. All originals (if originals are unavailable, copies will be acceptable) of all Technical Data<sup>1</sup> which is pertinent to the support of the Remedial Response Program and has been furnished to the Subcontractor by E & E or has been generated by the Subcontractor in performance of this agreement. In the event that there is any disagreement as to whether certain data is considered pertinent, the START Program Manager shall make the final determination. This determination shall not be subject to the terms of the Article entitled "Disputes."

D. Copies of all other types of additional data, including but not limited to: reference materials, source lists, field notes, log books, chemical data, maps, and photographs pursuant to the clause "Rights in Data--Special Works (EPAAR 1552.227-72).

E. Upon receipt of all data provided to E & E by the Subcontractor under this paragraph, E & E START Financial Manager shall acknowledge in writing to the Subcontractor the receipt of all confidential or other data.

### 32. TERMINATION BY E & E

Notwithstanding anything to the contrary in this Subcontract Agreement, termination of Subcontractor services hereunder shall be implemented in accordance with the terms set forth in this paragraph:

A. This Subcontract Agreement may be terminated by E & E at any time (1) upon termination of the Contract by the client; (2) for convenience upon reasonable notice to Subcontractor; or (3) in whole or in part for any breach of this Agreement, upon notice by E & E to the Subcontractor in accordance with the remedy provisions of Article 33.

B. In the event that termination is invoked, E & E's sole responsibility shall be for the

---

<sup>1</sup>"Technical Data" as used herein means recorded information, regardless of form or characteristic, of a scientific or technical nature. It may document research, experimental, developmental, or engineering work; or be usable or used to define a process or to procure, produce, support, maintain, or operate material. This data may be graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design type documents; in machine forms such as punched cards, magnetic tape, computer disks or printouts of data retained in computer memory. Examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information.

services and products provided by Subcontractor which were accepted as satisfactory by the client prior to the termination date and for which costs E & E is reimbursed by the client. This subparagraph in no way limits E & E's rights as set forth in Article 33 herein.

C. Upon receipt of a notice of termination, the Subcontractor shall promptly discontinue all services affected (unless the notice directs otherwise), and shall deliver or otherwise make available to E & E all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated in performing this Agreement, whether completed or in progress.

### 33. REMEDY IN THE EVENT OF BREACH BY THE SUBCONTRACTOR

A. In the event of any breach or failure by the Subcontractor to perform under this Agreement, E & E shall be entitled to avail itself of any and all of the following remedies:

- (1) E & E may reject equipment, material and/or services provided by the Subcontractor which are not in conformance with the contract requirements;
- (2) E & E may suspend or stop performance of any and all site services under this agreement;
- (3) E & E, at its discretion, may complete the work or retain the services of a third-party to complete the work and recover from the Subcontractor any increased costs or deduct such increased costs from any amounts due the Subcontractor under this Subcontract.
- (4) E & E may terminate this Subcontract Agreement for default;
- (5) E & E may require the Subcontractor to remedy by correction or replacement, without cost to E & E, any breach of or failure to comply with the requirements of this Subcontract Agreement;
- (6) E & E may withhold and apply any funds due the Subcontractor for any work performed under this Agreement or under any other Contract or Subcontract between E & E and Subcontractor to reimburse E & E for any amounts that it is entitled to recover under this Article 33, to offset increased costs to be incurred as a result of such breach, or to satisfy any existing or future liability on the part of the Subcontractor which arises or may arise from such breach.

B. The foregoing remedies apply in the same manner and to the same extent to corrected or replacement materials or services, as to materials and services originally delivered or required to be delivered under this Agreement.

C. The failure of E & E to insist, in one or more instances, upon the performance of any

term of this contract is not a waiver of E & E's right to future performance of such term, and the Subcontractor's obligation for future performance of such term shall continue in effect.

D. The right and remedies of E & E in this paragraph are in addition to any other rights and remedies provided by law or under this contract.

34. NO WAIVER

No waiver by either party in any default by the other party in the performance of any provision of this Subcontract shall operate as or be construed as a waiver of any future default whether like or different in character.

35. INSURANCE COVERAGE TO BE FURNISHED BY SUBCONTRACTOR

The Subcontractor shall maintain, at its own expense, such insurance as is required by law or regulation, and at a minimum the types and amounts of insurance set forth in that clause of the General Conditions entitled, "Insurance", at the Subcontractor's sole expense, as follows:

A. The Subcontractor shall procure and maintain such insurance as is required by law or regulation, including that required by Subpart 28.3 of the Federal Acquisition Regulations (FAR) as of the date of execution of this Subcontract, and such insurance as the Contracting Officer prescribes by written direction.

B. At a minimum, the Subcontractor shall procure and maintain the insurance set forth in Exhibit 3, attached.

C. With respect to any insurance policy, all or part of the premiums of which the Subcontractor proposes to treat as a direct cost under this Subcontract, and with respect to any proposed qualified program of self-insurance, the approval of the START Financial Manager shall be obtained prior to any claim for payment therefor. The Subcontractor shall be reimbursed for the portion allocable to this Subcontract.

D. The Subcontractor hereby agrees to indemnify, defend and hold harmless E & E, its directors, officers, agents and employees against any and all claims, loss, damage, injury, statutory or regulatory violation, liability to or death of any person, including any employee of E & E, Client or Subcontractor, or for loss of or damage to the property, including claims thereof and reasonable attorneys fees arising therefrom, arising out of or related to the negligent acts, errors or omissions of Subcontractor in performing pursuant to this Agreement.

36. STANDARDS

All services hereunder shall be performed by employees or agents of Subcontractor who are experienced and highly skilled in their profession, and in accordance with the highest standards of workmanship in their professions.

37. DISPUTES

Should any dispute arise between E & E and the Subcontractor or between E & E and the Government concerning the work performed by the Subcontractor under this Subcontract, the Subcontractor agrees to be bound by the decision of the EPA Contracting Officer, and any appeals therefrom, to the same extent E & E is bound. A claim based on such an unresolved dispute shall be asserted by E & E on behalf of the Subcontractor against the Government under the provisions of FAR Paragraph 52.233-1 and the Contract Disputes Act of 1978 (41 USC.601-613). The Subcontractor agrees to pay the cost of the prosecution or the processing of any dispute between E & E and the Government concerning work performed by the subcontractor, and including but not limited to administrative and legal expenses incurred by E & E in prosecuting any such claim on behalf of the Subcontractor.

The Subcontractor also agrees to pay the cost of any appeal, including but not limited to, E & E's legal fees and disbursements, asserted at the Subcontractor's request by E & E from the EPA Contracting Officer's decision concerning work performed by the Subcontractor.

38. DESIGNATION OF PROPERTY ADMINISTRATOR

The Contract Property Administrator, DCMAO, 111 West Huron Street, Room 1103, Buffalo, New York 14202-2392 is hereby designated the property administration function for this Subcontract. The Subcontractor agrees to furnish information regarding Government property to the Contract Property Administrator in the manner and to the extent required by the Contract Property Administrator or his duly designated successors, or by the E & E START Financial Manager.

39. ENTIRE AGREEMENT

This Subcontract, with all Exhibits and materials incorporated herein by reference and made part hereof, shall constitute the entire understanding between the parties and no conversations, memoranda, or other matters, whether written or oral, and previously exchanged between the parties hereto, shall alter the terms of this Subcontract.

40. GOVERNING LAW

The parties hereby agree that this Subcontract, including its validity and interpretation, shall in all respects be governed by the laws of the State of New York.

41. JURISDICTION

This Subcontract shall be deemed to be executed in and performed in the County of Erie, of the State of New York, and any action brought pursuant to this Subcontract may be brought only in the Supreme Court of the State of New York, County of Erie.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

AGREED TO AND ACCEPTED:

\_\_\_\_\_

ECOLOGY AND ENVIRONMENT, INC.

By \_\_\_\_\_  
(Signature)

By \_\_\_\_\_  
Ronald L. Frank  
Executive Vice President

\_\_\_\_\_  
(Printed or Typed Name)

\_\_\_\_\_  
(Title)

**EXHIBIT 1**  
**STATEMENT OF WORK**

**EXHIBIT 2**  
**COST/PRICE DATA**

**EXHIBIT 2**

**COST/PRICE DATA**

TDD No.

PAN No.

The work to be performed hereunder shall be on a Firm Fixed Unit Price basis with a not-to-exceed dollar obligation of \_\_\_\_\_ Dollars (\$\_\_\_\_\_). Invoices must show unit costs, proper price extension, and must be supported by appropriate documentation.

The not-to-exceed total obligated hereunder is predicated on the cost quotation from \_\_\_\_\_ dated \_\_\_\_\_ attached hereto.

Invoices are to be forwarded to ECOLOGY AND ENVIRONMENT, INC., 6405 Metcalf Avenue, Cloverleaf Building 3, Suite 404, Overland Park, Kansas, 66202, Attn: Edward J. Pfeiffer for approval by , (E &E Project Geologist) , before being forwarded for processing and payment.

The Subcontractor is also requested to submit the attached "Subcontractor Cost Release" form with your final invoice.

## SUBCONTRACTOR'S COST RELEASE

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### Instructions

SUBCONTRACTOR: Submit original and 2 copies.  
Sign original and conform signature on copies.

---

Pursuant to the terms and conditions of this subcontract dated \_\_\_\_\_, 19\_\_\_\_,  
and in consideration of the sum of \_\_\_\_\_ Dollars  
(Total of Cost Paid and Payable)

(\$\_\_\_\_\_) which has been or is due to be paid under the said subcontract to:

\_\_\_\_\_  
(Subcontractor's Name and Address)

herein called the subcontractor to its assignees, if any, does release, and discharge Ecology and Environment, Inc. of all liabilities related to costs incurred by the subcontractor under the said subcontract during the period \_\_\_\_\_ except for:

1. Specified claims in stated amounts or in estimated amounts where the amounts are not susceptible of exact statement, as follows: (If none, so state) \_\_\_\_\_  
\_\_\_\_\_

2. Claims, together with reasonable expenses incidental thereto, based upon the liabilities of the Subcontractor to third parties arising out of the performance of the said subcontract, which are not known to the Subcontractor on the date of the execution of this release.

IN WITNESS WHEREOF, this release has been executed this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
(Subcontractor or Corporate Name)

By: \_\_\_\_\_

\_\_\_\_\_  
(Title)

### **EXHIBIT 3**

#### **INSURANCE REQUIREMENTS**

It is expressly understood and agreed that before work is actually commenced, Subcontractor and Sub-subcontractor, if any, unless expressly relieved of the insurance requirements specified below in writing by E & E shall subscribe for and maintain in full force and effect during the progress of the work, the following minimum insurance coverage:

- A. Workmen's Compensation and Employer's Liability insurance coverage in amounts sufficient to satisfy state law.
- B. Comprehensive General Liability insurance covering bodily injury in an amount of no less than \$1,000,000 per occurrence.
- C. Comprehensive General Liability insurance covering broad form property damage in an amount of not less than \$1,000,000 per occurrence.
- D. Comprehensive Automobile Liability insurance extending to owned and non-owned and hired automobiles in an amount of not less than \$1,000,000 per occurrence.
- E. When aircraft are used in the performance of Agreement, Aircraft Public and Passenger Liability insurance extending to owned and non-owned and hired aircraft in an amount not less than \$1 million per occurrence.
- F. Pollution Liability insurance in the amount of \$1,000,000 per occurrence.

Note: These certificates, with the exception of Workmen's Compensation and Employer's Liability, shall specify Ecology and Environment, Inc., as additional insured and all shall require thirty (30) days prior notice of cancellation of coverage to E & E. Notice to E & E and E & E's written approval shall similarly be required where insurance coverages are decreased or other material change in coverage occurs.

Certificates shall be forwarded to:

Edward J. Pfeiffer  
Ecology and Environment, Inc.  
6405 Metcalf Avenue  
Cloverleaf Building 3, Suite 404  
Overland Park, Kansas 66202

## **Certification of Nonsegregated Facilities**

We, \_\_\_\_\_, certify to Ecology and Environment, Inc., ( E & E), that we do not and will not maintain or provide for our employees any segregated facilities at any of our establishments, and that we do not and will not permit our employees to perform their services at any location, under our control, where segregated facilities are maintained. We understand and agree that a breach of this certification is a violation of Equal Opportunity clause required by Executive Order 11246 of 24 September 1965.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom or otherwise.

We further agree that (except where we have obtained identical certifications from proposed subcontractors for specific time periods) we will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that we will retain such certifications in our files; and that we will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods);

### **Notice to Prospective Subcontractors of Requirement for Certification of Nonsegregated Facilities.**

A certification of Nonsegregated Facilities, as required by the 9 May 1967 order on Elimination of Segregated Facilities, by the Secretary of Labor (32 Fed. Reg. 7439, 19 May 1967), must be submitted prior to the award of a subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

**Note:** Whoever knowingly and wilfully makes any false, fictitious or fraudulent representation may be liable to criminal prosecution under 18 USC 1001.

\_\_\_\_\_  
Company Name

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

TDD:  
PAN:

**FAR 52.203-11 CERTIFICATION AND DISCLOSURE  
REGARDING PAYMENTS TO INFLUENCE CERTAIN  
FEDERAL TRANSACTIONS  
(APRIL 1991)**

**(THE FOLLOWING MUST BE COMPLETED BY THE OFFEROR AND  
INCLUDED WITH THE SUBMISSION OF ANY OFFER  
IN EXCESS OF \$100,000)**

- A. The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.
- B. The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,
  - 1. No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;
  - 2. If any fund other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and
  - 3. He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall *certify and disclose accordingly.*
  - 4. Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000, for each such failure.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_

\_\_\_\_\_  
Company Name

By: \_\_\_\_\_  
(Authorized Representative)

Title: \_\_\_\_\_

This certification must be completed and returned promptly to:

Ecology and Environment, Inc.  
Cloverleaf Bldg. 3  
6405 Metcalf  
Overland Park, Kansas 66202

Attention: Edward J. Pfeiffer

TDD:  
PAN:

**CERTIFICATION OF NON-DEBARMENT**

(Ref: FAR 52.209-6)

Seller hereby certifies that it and its principals are not debarred, suspended or proposed for debarment by the Federal Government. Seller agrees to notify Ecology and Environment, Inc., (E & E) in the event it becomes debarred, suspended or otherwise ineligible for any Federal program during the performance of any effort under an E & E purchase order or subcontract.

---

Signature/Title of Authorized Representative

---

Printed Name

---

Company Name

---

Date

This certification must be completed and returned promptly to:

Ecology and Environment, Inc.  
Cloverleaf Bldg. 3  
6405 Metcalf  
Overland Park, Kansas 66202

Attention: Edward J. Pfeiffer

TDD:

PAN:

**CLEAN AIR AND WATER CERTIFICATION**

**REF: FAR 52.223-1**

The Offeror certifies to Ecology and Environment, Inc., (E & E) and the cognizant agencies of the United States Government that:

- a. Any facility to be used in the performance of this proposed contract is ☐; or is not ☐ listed on the Environmental Protection Agency (EPA) List of Violating Facilities.
- b. The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the EPA, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and
- c. The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_

\_\_\_\_\_  
Company Name

By: \_\_\_\_\_  
(Authorized representative only)

Title: \_\_\_\_\_

This certification must be completed and returned promptly to:

Ecology and Environment, Inc.  
Cloverleaf Bldg. 3  
6405 Metcalf  
Overland Park, Kansas 66202

Attention: Edward J. Pfeiffer

## **APPENDIX F**

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### **MW-4 Soil Boring Log**

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-4

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

- ☒ Monitor water quality for background purposes  
☐ Monitor leachate quality within sanitary landfill  
☐ Monitor groundwater quality in the direction of groundwater flow  
☐ Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes. Where? Locations of wells are as field-determined by E&E personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 5.0' to (j) 15.0'

Ground Surface Elevation at Well (g) unknown

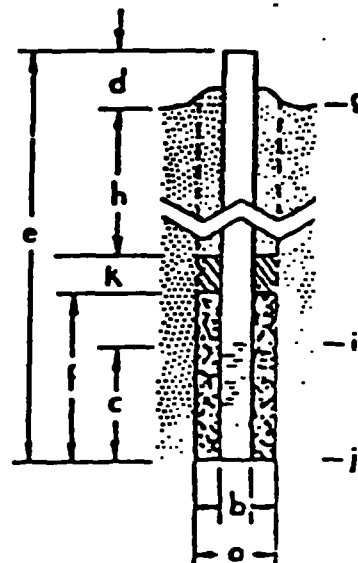
Height of Well Head Above Ground (d) 2.3'

Depth of Well From Head (e) 17.3'

Backfill:

Type	Depth
<u>Granular Well Pack</u>	(f) <u>5.0' - 15.0'</u>
<u>Pelletized Bentonite</u>	(k) <u>2.0' - 5.0'</u>
<u>Grout</u>	(h) <u>0.0' - 2.0'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

# LOG OF BORING NO. MWA

OWNER R. V. HOPKINS	ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.
SITE DAVENPORT, IOWA	PROJECT NAME MONITORING WELL INSTALLATION

Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description	
	HS										(0.5) <u>SILT, Brown</u>	
											<u>CLAYEY SILT WITH GRAVEL, Brown</u>	
1	SS	24		23					5		(5.5)	
	HS										<u>SILTY CLAY, TRACE SAND, Gray</u>	
2	SS	24		49					10		(13.5)	
	HS										(15.0) <u>WEATHERED SHALEY LIMESTONE, Gray</u>	
	3" O.D.	Split-Barrel Sampler Used									15	Bottom of Boring Hollow Stem Auger Refusal @ 15.0'
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.												

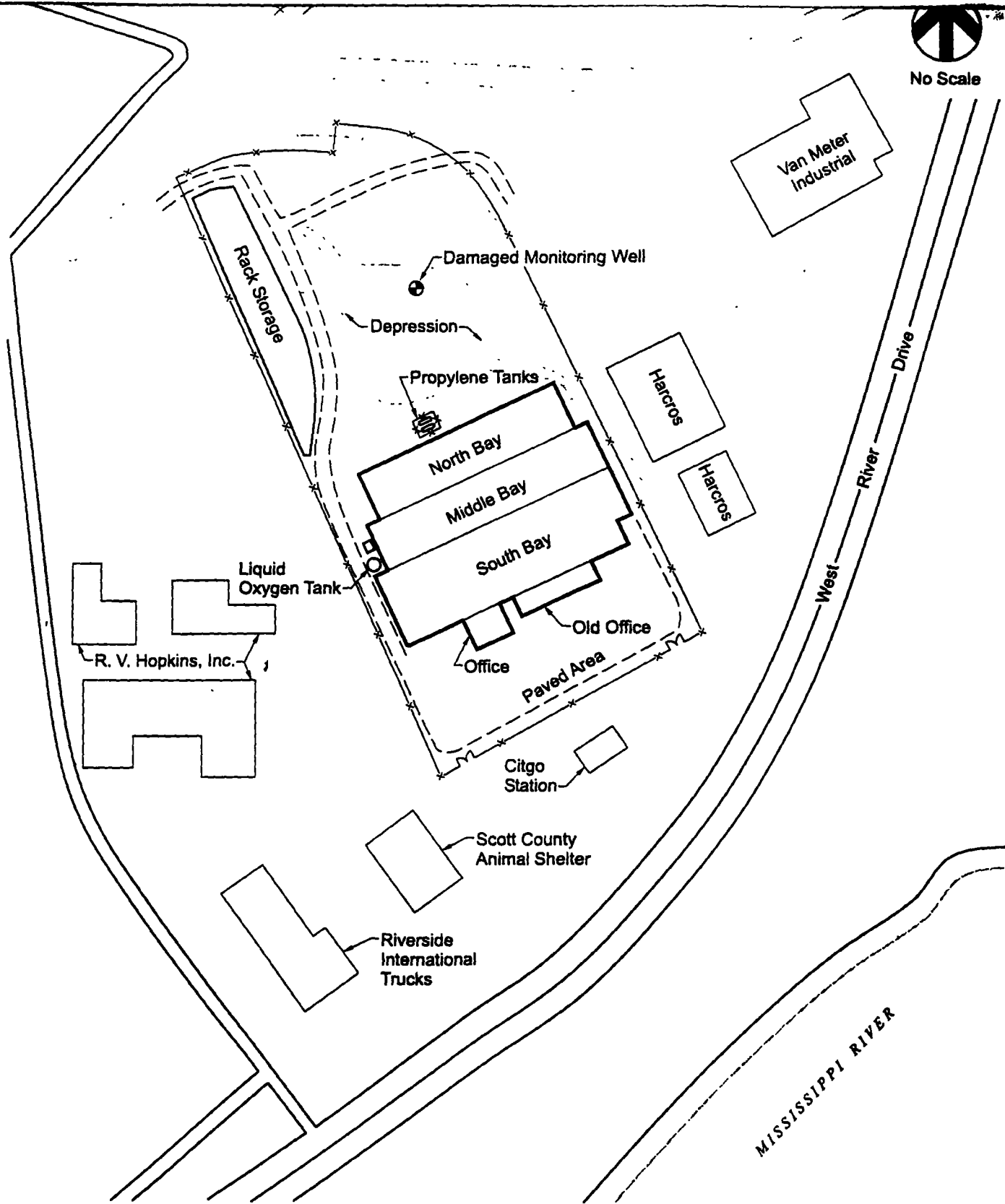
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

WATER LEVEL OBSERVATIONS				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK	BORING STARTED 6/6/84	
W.L.	None	W.S. OR W.D.	A.B.		BORING COMPLETED 6/6/84	
W.L.		B.C.R.	A.C.R.		RIG 2A	FOREMAN JAF
W.L.					APPROVED RAL	JOB # 784521

## **APPENDIX G**

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### **Figures 1 and 2**



HDR Engineering, Inc.

## Site Plan

MIDWEST	Midwest Metals, Inc. Davenport, Iowa Facility
METALS,	
INC.	

Date

Figure

2

66th Copy

IOWA RCRA & STATE PROGRAM GRANT

HDR

February 2, 1998

Mr. Brian Mitchell  
USEPA Region VII  
726 Minnesota Avenue  
Kansas City, Kansas 66101



R00078907

RCRA Records Center

RE: Abandonment of Monitoring Well No. 4  
Midwest Metals, Inc. Davenport, Iowa

Dear Mr. Mitchell:

The purpose of this letter is to request that the USEPA abandon a groundwater monitoring well, identified as MW-4, which is located on property adjacent to R.V. Hopkins. The monitoring system for the Hopkins site consists of five monitoring wells. Monitoring well #4 is situated on the Midwest Metals property. According to the information obtained from EPA's project file, this well is approximately 15 feet deep with a 10 foot long section of 0.01 inch PVC well screen. The monitoring well is constructed in alluvium material consisting of silty clay with a trace of sand. A figure depicting the location of this well and the associated boring log is contained in Attachment 1. Monitoring well no. 4 is identified as "Damaged Monitoring Well" in the figure.

The monitoring well in question has been subjected to frost heave. The concrete pad is approximately six inches above grade, a photo of this well is contained in Attachment 2. Based on the current condition of this well it appears that the integrity of this well has been compromised, and we are requesting that it be abandoned to prevent the possibility of surface runoff from entering through the borehole.

Once you have had an opportunity to review this information, please contact me at (402) 399-1058 to discuss this request.

Sincerely,

HDR ENGINEERING, INC.

*Bruce R. Larsen*

Bruce R. Larsen, P.E.  
Project Manager

Enclosure

cc: file

HDR Engineering, Inc.

Employee-owned

8404 Indian Hills Drive  
Omaha, Nebraska  
68114-4049

Telephone  
402 399-1000



MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-4

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes  
☐ Monitor leachate quality within sanitary landfill  
☐ Monitor groundwater quality in the direction of groundwater flow  
☐ Other: Describe \_\_\_\_\_

LOCATION OF WELL:

the location of the monitoring point accurately shown on the location diagram?  
yes . Where? Locations of wells are as field-determined by E&I personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 5.0 ' to (j) 15.0 '

Ground Surface Elevation at Well (g) unknown

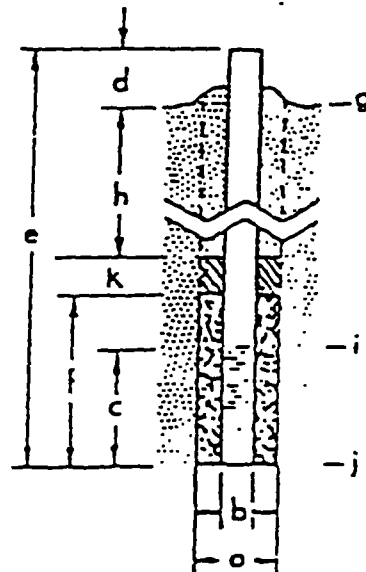
Height of Well Head Above Ground (d) 2.3 '

Depth of Well From Head (e) 17.3 '

Backfill:

Type	Depth
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<u>Pelletized Bentonite</u>	(k) <u>2.0' - 5.0'</u>
<u>Grout</u>	(h) <u>0.0' - 2.0'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

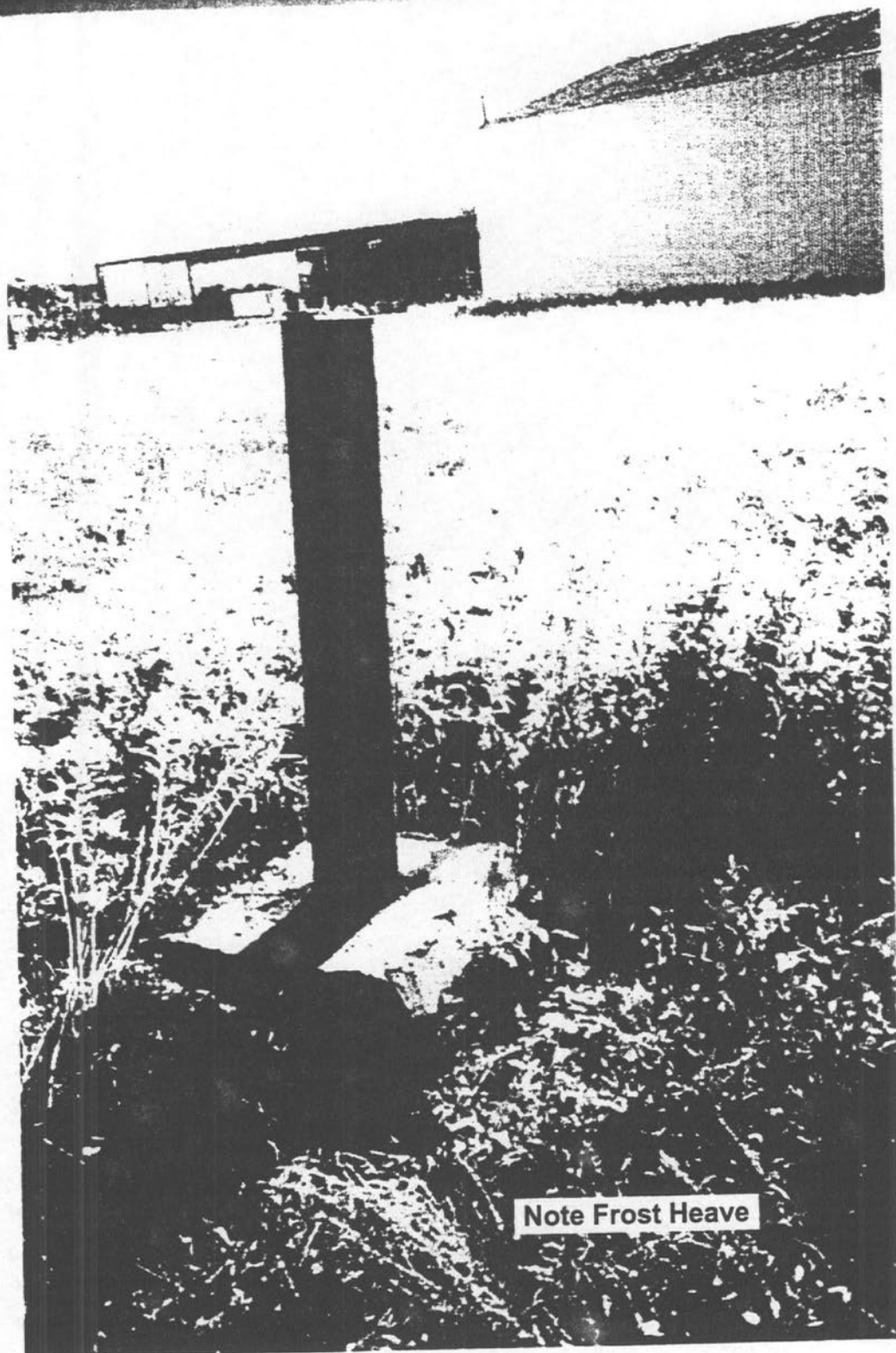
<b>OWNER</b> R. V. HOPKINS										<b>ECOLOGY &amp; ENVIRONMENT, INC.</b>									
<b>SITE</b> DAVENPORT, IOWA										<b>PROJECT NAME</b> MONITORING WELL INSTALLATION									

Sample No	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs /ft <sup>2</sup>	Water Content-%	Dry Density-lbs /ft <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	HS										(0.5) <u>SILT, Brown</u>
											<u>CLAYEY SILT WITH GRAVEL, Brown</u>
1	SS	24		23					5	(5.5)	
	HS										<u>SILTY CLAY, TRACE SAND, Gray</u>
2	SS	24		49					10		
	HS									(13.5)	
									15	(15.0)	<u>WEATHERED SHALEY LIMESTONE, Gray</u>
3" O.D. Split-Barrel Sampler Used											Bottom of Boring Hollow Stem Auger Refusal @ 15.0'
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.											

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU. THE TRANSITION MAY BE GRADUAL

<b>WATER LEVEL OBSERVATIONS</b>				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK				<b>BORING STARTED</b> 6/6/84	
W.L.	None	W.S. OR W.D.	A.B.					<b>BORING COMPLETED</b> 6/6/84	
W.L.	B.C.R.		A.C.R.					<b>RIG</b> 2A	<b>FOREMAN</b> JAF
W.L.								<b>APPROVED</b> RAL	<b>JOB #</b> 784521



**HDR**

HDR Engineering, Inc.

## Monitoring Well No. 4

**MIDWEST  
METALS,  
INC.**

Midwest Metals, Inc.  
Davenport, Iowa Facility

Date

Figure

Iowa Department of Natural Resources

**Abandoned Water Well  
Plugging Record**

1. Owner:

Name: <u>EPA/Ecology &amp; Envir.</u>	City: <u>Overland Park</u>	State: <u>KS</u>
Address: <u>5405 Metcalf</u>	Zip: <u>66202</u>	Phone: <u>913</u> ) <u>432-9961</u>

2. Well (Cistern) Location:

PWSID#: \_\_\_\_\_

NW 1/4 of, SE 1/4 of, SW 1/4 of, Section 34, Twp. 78 N, Range 3 West/East(circle one)  
Scott County, Describe well location on property: EW-4: 2" PVC well  
w/ TD=15' installed N of Midwest Metals and NE of RV Hopkins

3. Description:

Well depth: <u>15</u> ft.	Casing material: steel, <u>plastic</u> , concrete, clay, brick, stone
Depth to water: _____ ft.	(circle one)
Casing diameter: <u>2</u> in.	Type of construction: <u>drilled</u> , driven, bored, dug, augered
Yr. or decade constrd.: <u>1984</u>	(circle one)
Depth of casing: <u>15</u> ft.	Check <input checked="" type="checkbox"/> if this is a Monitoring Well Well I D.: <u>EW-4</u>

Check ☐ if Cistern depth: \_\_\_\_\_ ft. diameter: \_\_\_\_\_ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: [Signature] Date Plugged: 8/13/99

*If plugged by certified well contractor, complete this box:*

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: [Signature] Cert. No. 40441

*OR, If plugged by well owner, complete this box:*

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Eligible for Grants-to-Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

**Water Supply Section  
Department of Natural Resources  
900 East Grand Avenue  
Des Moines, IA 50319-0034**

Iowa Department of Natural Resources

# Abandoned Water Well Plugging Record

1. Owner:

Name: <u>EPA/Ecology &amp; Envir.</u>	City: <u>Overland Park</u>	State: <u>KS</u>
Address: <u>6405 Metcalf</u>	Zip: <u>66202</u>	Phone: <u>913) 432-9961</u>

2. Well (Cistern) Location:

PWSID#: \_\_\_\_\_

NW 1/4 of, SE 1/4 of, SW 1/4 of, Section 34, Twp. 78 N, Range 3 West/East(circle one)  
Scott County, Describe well location on property: MW-4: 2" PVC well  
w/ TD=15' installed N of Midwest Metals and NE of RV Hopkins

3. Description:

Well depth: <u>15</u> ft.	Casing material: steel, <u>plastic</u> , concrete, clay, brick, stone
Depth to water: _____ ft.	(circle one)
Casing diameter: <u>2</u> in.	Type of construction: <u>drilled</u> , driven, bored, dug, augered
Yr. or decade constrd.: <u>1984</u>	(circle one)
Depth of casing: <u>15</u> ft.	Check <input checked="" type="checkbox"/> if this is a Monitoring Well Well I.D.: <u>MW-4</u>

Check ☐ if Cistern depth: \_\_\_\_\_ ft. diameter: \_\_\_\_\_ ft.

I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well.

Signature of Owner: [Signature] Date Plugged: 8/13/99

*If plugged by certified well contractor, complete this box:*

I have plugged this well as required by rule 567-39.8 of the Iowa Administrative Code (IAC).

Signature of Contractor: [Signature] Cert. No. 40441

*OR, If plugged by well owner, complete this box:*

The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code with the oversight and assistance of the designated county agent.

Signature of County Agent: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Eligible for Grants-to-Counties cost share: ☐ YES ☐ NO (Determined by County Agent)

Complete one form for each well plugged and submit within 30 days to the local county agent:

or, only if no county agent is available, to:

Water Supply Section  
Department of Natural Resources  
900 East Grand Avenue  
Des Moines, IA 50319-0034



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
726 MINNESOTA AVENUE  
KANSAS CITY, KANSAS 66101

Mr. Bruce Larsen  
HDR Engineering, Inc.  
8404 Indian Hills Drive  
Omaha, Nebraska 68114-4049

Dear Mr. Larsen:

Your letter dated February 2, 1998 has been reviewed. You sent a picture showing a well pad six to eight inches off the ground. Your claim that frost heave raised the well six to eight inches may or may not be true. Other wells installed in this area have not exhibited frost heave. Soil erosion is more likely the cause the well pad is six to eight inches off the ground. This conclusion is based upon two reasons: (1) The well is located in a storm water drainage area. (2) The great flood of 1993 impacted this area.

In closing, if you would like us to review this matter further, then please send us a top of casing survey that is stamped by a Registered Surveyor.

Sincerely,

*Brian Mitchell* 2/6/98  
Brian Mitchell

*Bob,*  
*Here's the info. on*  
*the well closure TDD*  
*I'm sending (sent)*  
*over. Put a good*  
*man/woman on*  
*this one. I know*  
*you will.*

*Scott*

D32

Site:	R.V. Hopkins
IT:	1A0022096002
Page:	1-3
Other:	Date Trans.
	4-24-86

APR 24 1986

Mr. Rod Vlieger, P.E.  
Eugene A. Hickok and Associates  
7700 University  
Des Moines, Iowa 50311

Dear Mr. Vlieger:

Enclosed is the information you requested regarding the R.V. Hopkins Site, whose owner/operator is a client of your company.

I apologize for taking so long to respond to your request. If you have any questions, please contact me at (913) 236-2856.

Sincerely yours,

Peter J. Culver, P.E.  
Technical Analysis  
and Support Section  
Superfund Branch  
Waste Management Division

Enclosures

bcc: Paul Doherty, SINV/EP&R  
Luetta Flournoy, RCRA/IOWA (w/enclosures)

WSTM:SPFD:TECH:PCULVER:odw:X685:4/21/86:culver's disk 3

TECH  
CULVER

TECH  
HERNDON

SPFD  
MORBY

*Culver*  
4/21/86

*Culver*  
4/21/86

*Morby*  
4/21/86



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
25 FUNSTON ROAD  
KANSAS CITY, KANSAS 66115

DATE: April 11, 1986

MEMORANDUM

SUBJECT: R.V. Hopkins Inc., Davenport, Iowa

FROM: Charles P. Hensley *CPH*  
Chief, EP&R/ENSV

TO: Robert L. Morby  
Chief, SPFD/WSTM

*[Handwritten signature]*  
**RECEIVED**

APR 15 1986

**SUPERFUND BRANCH**

Attached for your review is:

- ☒ Transmittal of well log information
- ☐ Work Plan
- ☐ Trip Report
- ☐ Preliminary Assessment
- ☐ HRS Form with Supporting Documentation
- ☐ Final Report on a Full-Field Investigation

If you have any questions or comments, please contact Paul Doherty at 236-3888.

Attachments

- cc: ☐ E&E  
☐ LABO  
☐ EP&R  
☐ EMCM  
☐ RCRA  
☐ SPFD  
☐ TOPE

**SUPERFUND**  
**MAY 1 1986**  
**SITE LOG**

*[Handwritten signature]*  
**John C. Wickland**  
Director, ENSV



## ecology and environment, inc.

FAIRWAY WEST OFFICE BLDG., 4350 SHAWNEE MISSION PARKWAY, SHAWNEE MISSION, KS 66205, TEL. 913-432-9961

International Specialists in the Environment

TO: Paul E. Doherty, ARPO  
FROM: William M. Oberle, FIT *Paul*  
THRU: Jim Buchanan  
DATE: April 3, 1986  
SUBJECT: R.V. Hopkins, Inc. Site - Information Request  
TDD #R-07-8402-13G

On March 26, 1986, the Region VII Ecology & Environment, Inc. Field Investigation Team (E&E/FIT) was requested by the U.S. Environmental Protection Agency to provide Eugene A. Hickok and Associates, Inc., a consultant of R.V. Hopkins, Inc., with soil boring logs and water level measurements. The water level measurements were collated from the three completed quarterly groundwater sampling at the R.V. Hopkins, Inc. Site in Davenport, Iowa. The report dates are listed in the attached List of References.

The requested information is attached and if it meets with your approval, may be forwarded to Hickok and Associates at your convenience.

The mailing address of Hickok and Associates is as follows:

Mr. Rod Vlieger, P.E.  
Eugene A Hickok and Associates, Inc.  
7700 University  
Des Moines, Iowa 50311

If you have any questions or comments, please call me at 432-9961.

WO:wm

MONITORING WELL ELEVATIONS:

The elevations of each of the monitoring wells, measured to the top of the PVC well casings are listed below. The elevations previously listed in the R.V. Hopkins, Inc. - Trip Report (TDD # R07-8402-13D) dated May 17, 1985 were measured to the top of the outer steel casing. The measurements listed below will be used to measure groundwater elevations.

Monitoring Well #1 - 566.72 ft. above mean sea level  
Monitoring Well #2 - 565.28 ft. above mean sea level  
Monitoring Well #3 - 570.01 ft. above mean sea level  
Monitoring Well #4 - 567.18 ft. above mean sea level  
Monitoring Well #5 - 565.93 ft. above mean sea level

The groundwater elevations of each of the monitoring wells on April 30, 1985 were as follows:

Monitoring Well #1 - 563.39 ft. above mean sea level  
Monitoring Well #2 - 557.45 ft. above mean sea level  
Monitoring Well #3 - 563.68 ft. above mean sea level  
Monitoring Well #4 - 557.18 ft. above mean sea level  
Monitoring Well #5 - 558.64 ft. above mean sea level (1).

The groundwater elevations in each of the monitoring wells on August 27, 1985 were as follows:

Monitoring Well #1 - 552.87 feet above mean sea level  
Monitoring Well #2 - 557.48 feet above mean sea level  
Monitoring Well #3 - 557.76\* feet above mean sea level  
Monitoring Well #4 - 559.48 feet above mean sea level  
Monitoring Well #5 - 556.83 feet above mean sea level (2).

\* = Value listed in approximate only due to constriction of PVC well casing.

The groundwater elevations of each of the monitoring wells on December 10, 1985 were as follows:

Monitoring Well #1 - 561.84 feet above mean sea level  
Monitoring Well #2 - 557.11 feet above mean sea level  
Monitoring Well #3 - 562.34 feet above mean sea level  
Monitoring Well #4 - 560.01 feet above mean sea level  
Monitoring Well #5 - 556.85 feet above mean sea level (3).

#### LIST OF REFERENCES

- 1) Oberle, William M.. December 30, 1985. R.V. Hopkins, Inc. Site-Data Summary. Ecology & Environment, Inc.; TDD #R07-8402-13D.
- 2) Oberle, William M.. February 27, 1986. R.V. Hopkins, Inc. Site-Data Summary. Ecology & Environment, Inc.; TDD #R07-8402-13E.
- 3) Chandler, Joe. January 2, 1986. Trip Report for R.V. Hopkins, Inc., Davenport, Iowa. Ecology & Environment, Inc.; TDD #R07-8402-13G.

June 29, 1984

Ecology and Environment, Incorporated  
4350 Johnson Drive  
Shawnee Mission, Kansas 66205

Attention: Mr. William Oberle      RE: Soil Borings and Monitoring  
Well Installation,  
R. V. Hopkins Drum Facility,  
Davenport, Iowa.  
Job No. 784521

**Terracon**

CONSULTANTS, INC.

1216 West 76th Street  
P.O. Box 2021  
Davenport, Iowa 52801  
(319) 391-6226

Gerald R. Olson, P.E.  
James A. Cunningham, P.E.  
Russell K. Lovas, P.E.  
Paul J. Schnyder, P.E.  
Gary K. Olson, P.E.  
David E. Koch

Gentlemen:

Enclosed are the boring logs for the soil borings and monitoring wells installed during the period June 5 through June 7, 1984. Five monitoring wells MW1 through MW5 were installed. Two additional auger borings numbered B-2 and B-3 were performed also.

Monitoring wells were drilled using hollow stem augers. These boreholes were instrumented with 2 inch I.D. Schedule 40 PVC pipe, previously approved in lieu of Schedule 80 PVC, having flush threaded joints. Field operations were conducted in accordance with bid specification for "Drilling, Sampling, and Installation of Monitoring Wells", TDD R-7-8402-13A dated May 17, 1984, pages 1-12 inclusive. The completed wells were installed with a vented hanger cap attached by a polypropylene rope to a dedicated bailer for each well. A locking steel protective casing was placed around the PVC pipe and set in a cement grout. Protective casings were locked with keyed-alike padlocks and these keys turned over to E & E, I personnel. As requested by your representatives, monitoring wells were allowed to set and stabilize for a period of 24 hours prior to purging using water obtained from municipal water supply on site.

The soils from the borings were logged at the time of drilling. The drillers' field descriptions, based on observations of disturbed samples, are indicated on the boring logs. Disturbed samples were obtained at regular intervals using both 3-inch O.D. and 2-inch O.D. split-barrel samplers. The sampler was

- 1 -

Offices In  
Iowa Cedar Falls, Cedar Rapids, Davenport  
Des Moines, Storm Lake  
Kansas Wichita, Kansas City  
Nebraska Omaha  
Oklahoma Oklahoma City, Tulsa

Geotechnical, Environmental and Materials Engineers

June 29, 1984

Terracon Consultants, Inc

advanced by means of a 140 pound hammer with a free fall of 30 inches. The number of blows to advance the sampler the last 12 inches of the sampling interval was typically recorded on the boring logs at the test depths. These samples were given to Ecology and Environment, Incorporated personnel at the site.

Groundwater observations and measurements were performed during and immediately after completion of the drilling operations and are indicated on the boring logs.

The auger borings were performed and monitoring wells installed at locations selected in the field by Ecology & Environment, Incorporated personnel. It is our understanding that ground surface elevations at the auger boring and monitoring well locations are to be determined by Ecology and Environment, Incorporated.

If there are any questions, or if we may be of further service, please contact us.

Very truly yours,

TERRACON CONSULTANTS, INC.

*Richard A. Lyons*

Richard A. Lyons  
Project Engineer

*Russell K. Lovaas*

Russell K. Lovaas  
Registered Professional Engineer  
Iowa #6161

RAL:RKL/wsh



## GENERAL NOTES

### DRILLING & SAMPLING SYMBOLS:

SS	: Split Spoon—1½" I.D., 2" O.D., unless otherwise noted	PS	: Piston Sample
ST	: Shelby Tube—2" O.D., unless otherwise noted	WS	: Wash Sample
PA	: Power Auger	FT	: Fish Tail
HA	: Hand Auger	RB	: Rock Bit
DB	: Diamond Bit—4 in, N, B	BS	: Bulk Sample
AS	: Auger Sample	PM	: Pressuremeter
HS	: Hollow Stem Auger	DC	: Dutch Cone
VS	: Vane Shear		

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted.

### WATER LEVEL MEASUREMENT SYMBOLS:

WL	: Water Level	WS	: While Sampling
WCI	: Wet Cave In	WD	: While Drilling
DCI	: Dry Cave In	BCR	: Before Casing Removal
AB	: After Boring	ACR	: After Casing Removal

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable ground water levels. In low permeability soils, the accurate determination of ground water elevations is not possible in even several days observation, and additional evidence of ground water elevations must be sought.

### DESCRIPTIVE SOIL CLASSIFICATION:

Coarse Grained or Granular Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50 % of their dry weight retained on a #200 sieve; they are described as clays, or clayey silts if they are cohesive, and silts if they are slightly cohesive or non-cohesive. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, granular soils are defined on the basis of their relative in-place density and fine grained soils on the basis of their consistency and plasticity. Example: Clayey silt, trace sand moderately plastic, stiff; silty fine sand, trace gravel, medium dense.

#### GRAIN SIZE TERMINOLOGY

Major Component Of Sample	Size Range
Boulders	Over 8 in. (200mm)
Cobbles	8 in. to 3 in. (200mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 2mm)
Sand	#4 to #200 sieve (2mm to .074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

#### RELATIVE DENSITY OF GRANULAR SOILS:

N-Blows/ft	Relative Density
0-3	Very Loose
4-9	Loose
10-29	Medium Dense
30-49	Dense
50-80	Very Dense
80 +	Extremely Dense

#### CONSISTENCY OF COHESIVE SOILS:

Unconfined Compressive Strength, $Q_u$ , psi	Consistency
≤ 500	Very Soft
500- 1,000	Soft
1,000- 2,000	Medium
2,000- 4,000	Stiff
4,000- 8,000	Very Stiff
8,000-16,000	Hard
> 16,000	Very Hard

#### RELATIVE PROPORTIONS

Descriptive Term(s) (Of Components Also Present in Sample)	Percent of Dry Weight
Trace	1-10
Little	10-20
Some	20-35
And	35-50

#### PLASTICITY OF FINE GRAINED SOILS:

Term	Plasticity Index
None to slight	0- 3
Slight	4- 7
Moderate	8-25
High	> 25

## LOG OF BORING NO. B-2

OWNER R. V. HOPKINS										ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.	
SITE DAVENPORT, IOWA										PROJECT NAME MONITORING WELL INSTALLATION	

Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	PA										2" Crushed rock
											(2.0) <u>CLAYEY SILT</u> , Brown
											<u>SILTY CLAY</u> , Red Brown
											(6.0) Weathered Limestone @ 6.0'
											Bottom of Boring
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.											

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

<b>WATER LEVEL OBSERVATIONS</b>				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK		BORING STARTED 6/7/84		
W.L.	None	W.S. OR W.D.	None			A.B.	BORING COMPLETED 6/7/84	
W.L.	B.C.R.		A.C.R.			RIG 2	FOREMAN SFM	
W.L.						APPROVED RAL	JOB # 784521	

## LOG OF BORING NO. B-3

OWNER R. V. HOPKINS										ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.	
SITE DAVENPORT, IOWA										PROJECT NAME MONITORING WELL INSTALLATION	
Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	PA								5		(1.5) <u>FILL, CLAYEY SILT, Brown</u>
									10		<u>FILL, SANDY GRAVELLY SILT WITH CONCRETE RUBBLE, Dark Gray</u>
									15		(13.0)
											(14.8) <u>SILTY CLAY, Dark Brown</u>
											(15.0) <u>WEATHERED LIMESTONE</u>
											Bottom of Boring
											Power Auger Refusal @ 15.0'
											No Monitoring Well Installed.
											NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN SITU. THE TRANSITION MAY BE GRADUAL.

WATER LEVEL OBSERVATIONS				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK		BORING STARTED 6/5/84	
W.L.	8' ±	W.S. OR W.D.	A.B.			BORING COMPLETED 6/5/84	
W.L.		B.C.R.	A.C.R.			RIG 2A	FOREMAN JAF
W.L.						APPROVED RAL	JOB # 784521

## LOG OF BORING NO. MW1

OWNER R. V. HOPKINS	ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.
SITE DAVENPORT, IOWA	PROJECT NAME MONITORING WELL INSTALLATION

Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs /ft. <sup>2</sup>	Water Content-%	Dry Density-lbs /ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	HS										<u>FILL, SAND, GRAVEL, LIMESTONE COBBLES AND BOULDERS, AND CONCRETE, BRICK, STEEL AND WIRE RUBBLE</u>
1	SS	18		3/6" 13/6" 20/6"					5		
	HS										
2	SS	24		8					10	(12.0)	<u>SAND AND GRAVELLY SILT, Gray</u>
	HS										
3	SS	24		2					15		
	HS										(19.8)
4	SS	2		30/2"					20		
	HS									(21.7)	<u>WEATHERED LIMESTONE, Brown Gray</u>
	3" O.D. split-barrel sampler used.										Bottom of Boring Hollow Stem Auger Refusal @ 21.7'  NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

WATER LEVEL OBSERVATIONS			Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK		BORING STARTED 6/5/84	
W.L.	6' ± W.S. OR W.D.	A.B.			BORING COMPLETED 6/6/84	
W.L.	B.C.R.	A.C.R.			RIG 2A	FOREMAN JAF
W.L.					APPROVED RAL	JOB # 784521

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-1

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes  
☐ Monitor leachate quality within sanitary landfill  
☐ Monitor groundwater quality in the direction of groundwater flow  
Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes . Where? Locations of wells are as field-determined by E&E personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 6.7 ' to (j) 16.7 '

Ground Surface Elevation at Well (g) Unknown

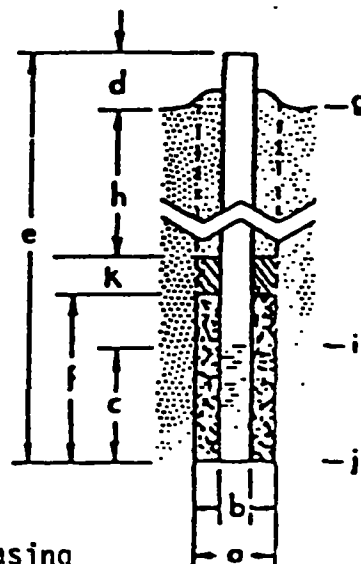
Height of Well Head Above Ground (d) 2.1 '

Depth of Well From Head (e) 23.8 ' \*\*

Backfill:

Type	Depth
<u>Granular Well Pack</u>	(f) <u>4.5' - 21.7'</u>
<u>Pelletized Bentonite</u>	(k) <u>2.5' - 4.5'</u>
<u>Grout</u>	(h) <u>0.0' - 2.5'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

\*\* Necessary to rockbit out collapsed casing  
as per Federal Inspector. Two hours to  
remove, replace, and regrout.

## LOG OF BORING NO. MW2

OWNER R. V. HOPKINS										ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.	
SITE DAVENPORT, IOWA										PROJECT NAME MONITORING WELL INSTALLATION	
Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class Symbol	Depth	Elevation	Description
	HS										CLAYEY SILT, Dark Brown
1	SS	24		15					5		(7.0)
	HS										CLAYEY SILT, Gray
2	SS	24		7					10		(14.7)
	HS										
3	SS	22		50/final 4"					15		(16.8) INTERBEDDED WEATHERED LIMESTONE AND SHALE
	3" O.D.	split-barrel sampler used.									Bottom of Boring
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.											
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU THE TRANSITION MAY BE GRADUAL											
WATER LEVEL OBSERVATIONS				Terracon Consultants, Inc.				BORING STARTED 6/7/84			
W.L.	5' ±	W.S. OR W.D.	A.B.	Cedar Falls Cedar Rapids Davenport				BORING COMPLETED 6/7/84			
W.L.		B.C.R.	A.C.R.	Des Moines Storm Lake, IA				RIG 2A FOREMAN JAF			
W.L.				Kansas City Wichita, KS				APPROVED RAL JOB # 784521			
				Omaha, NE							
				Oklahoma City Tulsa, OK							

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-2

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes

☐ Monitor leachate quality within sanitary landfill

☐ Monitor groundwater quality in the direction of groundwater flow

☐ Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes. Where? Locations of wells are as field-determined by E&I personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 6.8 ' to (j) 16.8 '

Ground Surface Elevation at Well (g) Unknown

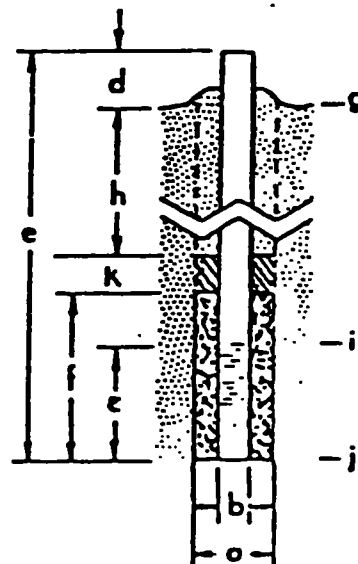
Height of Well Head Above Ground (d) 2.5 '

Depth of Well From Head (e) 19.3 '

Backfill:

Type	Depth
<u>Granular Well Pack</u>	(f) <u>5.0' - 16.8'</u>
<u>Pelletized Bentonite</u>	(k) <u>1.5' - 5.0'</u>
<u>Grout</u>	(h) <u>0.0' - 1.5'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

## LOG OF BORING NO. MW3

OWNER R. V. HOPKINS										ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.	
SITE DAVENPORT, IOWA										PROJECT NAME MONITORING WELL INSTALLATION	
Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	HS										<p><u>FILL, SANDY SILTY CLAY, CLAYEY SILT AND SILTY SAND</u>, Dark Brown to Brown with concrete, brick and apparent fly ash rubble.</p> <p>(Rod drop 10.0' to 13.5' for one blow)</p> <p>(Rod drop 15.5' to 18.0' for one blow)</p>
1	SS	18		5					5		
	HS										
2	SS	42		1/3.5'					10		
	HS										
3	SS	36		1/6" 1/2.5'					15		
	HS										
4	SS	13		50 1/2"					20		
<p>(17.0)</p> <p>(POSSIBLE FILL), SANDY SILT, <u>LITTLE CLAY</u>, Dark Gray (Pushed rod 20.0' to 21.25' in sampling interval)</p> <p>(21.0)</p> <p>(21.3) <u>WEATHERED LIMESTONE</u>, Gray</p> <p>Bottom of Boring</p> <p>NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.</p> <p>Borehole relocated 2.5 feet north due to rubble obstruction at 9.0' depth.</p>											

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU. THE TRANSITION MAY BE GRADUAL.

WATER LEVEL OBSERVATIONS				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK		BORING STARTED 6/7/84	
W.L.	3.5'	W.S. OR W.D.	A.B.			BORING COMPLETED 6/7/84	
W.L.		B.C.R.	A.C.R.			RIG 2	FOREMAN SFM
W.L.						APPROVED RAL	JOB # 784521
W.L.							

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-3

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes

☐ Monitor leachate quality within sanitary landfill

☐ Monitor groundwater quality in the direction of groundwater flow

☐ Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes . Where? Locations of wells are as field-determined by E&E personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 6.3 ' to (j) 16.3 '

Ground Surface Elevation at Well (g) Unknown

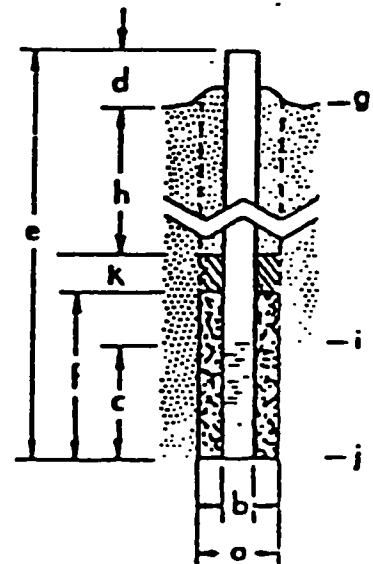
Height of Well Head Above Ground (d) 2.5 '

Depth of Well From Head (e) 23.8 '

Backfill:

Type	Depth
<u>Granular Well Pack</u>	<u>(f) 2.8' - 21.3' **</u>
<u>Pelletized Bentonite</u>	<u>(k) 2.0' - 3.8'</u>
<u>Grout</u>	<u>(h) 0.0' - 2.0'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

\*\* Backfilling with wellpack required 1400 lbs. material due to  
voids in fill material.

## LOG OF BORING NO. MW4

OWNER R. V. HOPKINS									ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.		
SITE DAVENPORT, IOWA									PROJECT NAME MONITORING WELL INSTALLATION		
Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs./ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class. Symbol	Depth	Elevation	Description
	HS										(0.5) <u>SILT, Brown</u>
											<u>CLAYEY SILT WITH GRAVEL, Brown</u>
1	SS	24		23					5		(5.5)
	HS										<u>SILTY CLAY, TRACE SAND, Gray</u>
2	SS	24		49					10		(13.5)
	HS										(15.0) <u>WEATHERED SHALEY LIMESTONE, Gray</u>
	3" O.D.	Split-Barrel Sampler Used									Bottom of Boring Hollow Stem Auger Refusal @ 15.0'
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.											

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU THE TRANSITION MAY BE GRADUAL

WATER LEVEL OBSERVATIONS			Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK		BORING STARTED 6/6/84		
W.L.	None	W.S. OR W.D.			A.B.	BORING COMPLETED 6/6/84	
W.L.		B.C.R.			A.C.R.	RIG 2A	FOREMAN JAF
W.L.						APPROVED RAL	JOB # 784521

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-4

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes  
☐ Monitor leachate quality within sanitary landfill  
☐ Monitor groundwater quality in the direction of groundwater flow  
☐ Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes. Where? Locations of wells are as field-determined by E&E1 personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 Inches

Casing Diameter (b) 2.0 Inches I.D.

Casing Material Flushtthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 5.0' to (j) 15.0'

Ground Surface Elevation at Well (g) unknown

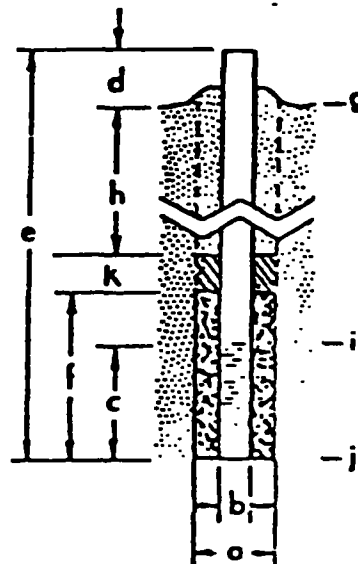
Height of Well Head Above Ground (d) 2.3'

Depth of Well From Head (e) 17.3'

Backfill:

Type	Depth
<u>Granular Well Pack</u>	(f) <u>5.0' - 15.0'</u>
<u>Pelletized Bentonite</u>	(k) <u>2.0' - 5.0'</u>
<u>Grout</u>	(h) <u>0.0' - 2.0'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

## LOG OF BORING NO. MW5

OWNER R. V. HOPKINS									ARCHITECT-ENGINEER ECOLOGY & ENVIRONMENT, INC.		
SITE DAVENPORT, IOWA									PROJECT NAME MONITORING WELL INSTALLATION		
Sample No.	Type Sample	Sampling Distance	Recovery	Blows/ft.	Unconfined Compressive Strength-lbs /ft. <sup>2</sup>	Water Content-%	Dry Density-lbs./ft. <sup>3</sup>	Unified Class Symbol	Depth	Elevation	Description
	HS										2" Crushed Stone FILL, SILTY CLAY, Brown WITH BRICK, CONCRETE AND OTHER MISCELLANEOUS FILL,
1	SS	24		7					5		(6.0)
	HS										(7.0) <u>SILTY CLAY</u> , Dark Brown
2	SS	24		12					10		<u>SILTY CLAY</u> , Gray
	HS								15		(15.9)
3	SS	23		60/final 3'							(16.9) <u>INTERBEDDED WEATHERED LIMESTONE AND SHALE</u> ,
	3" O.D.	Split-Barrel Sampler used									Bottom of Boring
NOTE: Soil and rock descriptions are from drillers' logs based on field observations of disturbed samples.											
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES IN-SITU. THE TRANSITION MAY BE GRADUAL.											
WATER LEVEL OBSERVATIONS				Terracon Consultants, Inc. Cedar Falls Cedar Rapids Davenport Des Moines Storm Lake, IA Kansas City Wichita, KS Omaha, NE Oklahoma City Tulsa, OK				BORING STARTED 6/7/84			
W.L. 6.0' W.S. OR W.D. 5.6' A.B.								BORING COMPLETED 6/7/84			
W.L. B.C.R. A.C.R.								RIG 2A FOREMAN JAF			
W.L.								APPROVED RAL JOB # 784521			

MONITORING WELL  
DOCUMENTATION FORM  
NO. MW-5

PROJECT: R.V. HOPKINS DRUM FACILITY  
DAVENPORT, IOWA

PROJECT NO. 784521

Specific Strata to be Monitored is fill material below the existing plant which  
lies above bedrock.

Depth Below Ground Surface That Monitored Strata Was Encountered \*

PURPOSE OF WELL:

☒ Monitor water quality for background purposes  
☐ Monitor leachate quality within sanitary landfill  
☐ Monitor groundwater quality in the direction of groundwater flow  
Other: Describe \_\_\_\_\_

LOCATION OF WELL:

Is the location of the monitoring point accurately shown on the location diagram?  
Yes. Where? Locations of wells are as field-determined by E&I personnel.

CONSTRUCTION DETAILS:

Boring Diameter (a) 6.0 inches

Casing Diameter (b) 2.0 inches I.D.

Casing Material Flushthreaded PVC

Screening length (c) 10.0 ' Screen Opening .01 inches

From Depth (i) 6.0 ' to (j) 16.0 '

Ground Surface Elevation at Well (g) Unknown

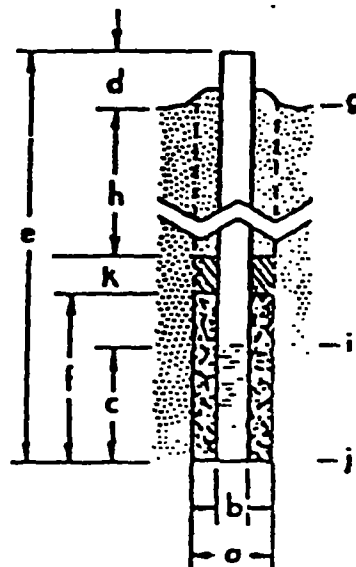
Height of Well Head Above Ground (d) 2.5 '

Depth of Well From Head (e) 18.5 '

Backfill:

Type	Depth
<u>Granular Well Pack</u>	<u>(f) 4.5' - 16.9'</u>
<u>Pelletized Bentonite</u>	<u>(k) 2.5' - 4.5'</u>
<u>Grout</u>	<u>(h) 0.0' - 2.5'</u>

Type of Well Cap Vented PVC cap/bailer combination.



\*Not Applicable

# UNIFIED SOIL CLASSIFICATION SYSTEM

Major divisions			Group symbols	Typical names	Laboratory classification criteria							
<div>Coarse-grained soils (More than half of material is larger than No. 200 sieve size)</div> <div>Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 per cent . . . . . GW, GP, SW, SP More than 12 per cent . . . . . GM, GC, SM, SC 5 to 12 per cent . . . . . Borderline cases requiring dual symbols</div>					Gravels (More than half of coarse fraction larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3			
						Gravels with fines (Appreciable amount of fines)	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW			
							GM	Silty gravels, gravel-sand-silt mixtures				
						Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols	
					SW			Well-graded sands, gravelly sands, little or no fines				
					Sands with fines (Appreciable amount of fines)		SP	Poorly graded sands, gravelly sands, little or no fines	Atterberg limits above "A" line with P.I. greater than 7			
							SM	Silty sands, sand-silt mixtures	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3			
					<div>Fine-grained soils (More than half of material is smaller than No. 200 sieve)</div>	Silt and clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	Not meeting all gradation requirements for SW	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in hatched zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols.	
								CL				Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
								OL				Organic silts and organic silty clays of low plasticity
Silt and clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	Atterberg limits above "A" line with P.I. greater than 7									
		CH		Inorganic clays of high plasticity, fat clays								
		OH		Organic clays of medium to high plasticity, organic silts								
Highly organic soils	Pe	Peat and other highly organic soils										

For classification of fine-grained soils and fine fraction of coarse-grained soils.

Atterberg Limits plotting in hatched area are borderline classifications requiring use of dual symbols.

Equation of A-line:  
 $PI = 0.73 (LL - 20)$

TERRACON CONSULTANTS, INC.



# ecology and environment, inc.

FAIRWAY WEST OFFICE BLDG., 4350 JOHNSON DRIVE, SHAWNEE MISSION, KANSAS 66205, TEL. 913-432-9961

International Specialists in the Environmental Sciences

Site: RV Hopkins  
ID #: 180022096028  
Est: 12  
Other: E&E  
5-17-85

TO: Paul E. Doherty, ARPO  
THRU: Jim Buchanan, RPM  
FROM: William Oberle, FIT *WMO*  
DATE: May 17, 1985  
SUBJECT: R.V. Hopkins, Inc. - Trip Report  
TDD #R-07-8402-13D  
TDD #R-07-8402-13C

On April 22, 1985, the Region VII Ecology & Environment, Inc. Field Investigation Team (E&E/FIT) was tasked by the U.S. Environmental Protection Agency (EPA) to conduct the initial quarterly groundwater sampling of the onsite monitoring wells at the R.V. Hopkins site. Additional tasks included the surveying of the monitoring well elevations and if possible, the collection of surface water samples from runoff points. A total of 200 hours were allocated for the task under Technical Directive Document (TDD) #R-07-8402-13D.

As part of an air monitoring feasibility study for the R.V. Hopkins, Inc. site that was tasked by the EPA under TDD #R-07-8402-13C, the E&E/FIT also planned to conduct an onsite air survey for organic vapors and airborne particulates. In addition, 1-3 soil/dust samples were also to be collected from the 0-0.5 inch layer of the onsite soils in order to identify the metal concentrations in the suspended/settleable particulates which would be available for offsite migration via wind turbulence. A total of 50 hours have been allocated for the feasibility study.

The E&E/FIT sampling team, consisting of William Oberle and Kenna Roberson, travelled to Davenport, Iowa on April 29, 1985. An offsite reconnaissance of the site was conducted by the team after their arrival in Davenport, Iowa.

Well purging began at 0850 hours (4/30/85) at the offsite monitoring well (MW#4). Each well was purged of three well volumes of water. Each well was also monitored for organic vapors prior to purging with a HNu equipped with a 10.2 eV probe and calibrated in benzene equivalents.

Surveying of monitoring well elevations was also initiated on April 30, 1985. A city benchmark near the southwest corner of the R.V. Hopkins property served as the reference point (565.68 ft. above mean sea level). Continu-

Page Two  
TDD #R-07-8402-13D  
TDD #R-07-8402-13C

ous monitoring of airborne particulates was also performed during this portion of the surveying activities. However, both activities were curtailed because of rainfall.

Groundwater samples were collected on May 1, 1985 beginning with MW#4 at 0840 hours (See Table 1). Five groundwater samples plus one field duplicate sample were collected. Each of the samples was collected for Dissolved Metals (Task 1 & 2) analysis. These samples were preserved with HNO<sub>3</sub> to pH <2 and field filtered. In addition, each sample was also collected for priority pollutants - (acids, base/neutrals and pesticide fractions) and volatile organics (VOA) analyses. A field blank for the pesticide and volatile organics fractions was also prepared. All sample fractions were preserved on ice at 4° C. Splits of the dissolved metals fraction were requested by Mr. Hopkins and were provided by the FIT in his own bottles and in a preserved but unfiltered state. Mr. Hopkins stated he would refrigerate them until his assistant returned on May 6, 1985 and then have them filtered and analyzed. No request was made for splits of the organic priority pollutants sample fractions.

Static water levels and the physical characteristics of each groundwater sample were also obtained by the FIT. This physical characterization included groundwater pH, temperature (in °C), and conductivity (See Table 2).

The surveying of monitoring well elevations was completed after the conclusion of the groundwater sampling activities. The elevations of each monitoring well are as follows:

Monitoring Well #1 - 567.39 feet  
Monitoring Well #2 - 567.36 feet  
Monitoring Well #3 - 570.51 feet  
Monitoring Well #4 - 566.53 feet  
Monitoring Well #5 - 566.43 feet

567.18 - TDD #R-07-8402-13DC  
568.03 - June 93

No soil/dust samples were collected because of rainfall which eliminated the collection of suspendable/settleable particulates. However, the quantity of precipitation received was not great enough to generate sufficient runoff water which could be sampled during daylight hours.

During the sampling activities it was observed that the berms along the west-northwest boundary of the site appeared to have been increased in height during the last year. The southeast corner of the site (east of the Sludgemaster building) was receiving fill dirt during the current onsite activity period. The fill dirt was generated by the City of

Page Three

TDD #R-07-8402-13D

TDD #R-07-8402-13C

Davenport's construction activities along Schmidt Road, south of the site to Highway 61. The city plans include removing old pavement and sewer lines and the construction of a new street surface and sewer line. The entire length of Schmidt Road between Highway 61 and Rockingham Road (to the north) will be renovated during the next 3-4 months.

The sampling team returned to Kansas City, Missouri on May 2, 1985. A total of seven groundwater samples (including one duplicate and one field blank) were relinquished to the U.S. EPA Laboratory in Kansas City, Kansas on May 3, 1985.

WO:sd

TABLE 1: SAMPLE SUMMARY

R.V. Hopkins, Inc. Site

Davenport, Iowa

TDD #R07-8402-13D

<u>EPA Sample #</u>	<u>Sample Location</u>
AKJX5001	Monitoring Well #4
AKJX5002	Monitoring Well #5
AKJX5003	Monitoring Well #3
AKJX5004	Monitoring Well #1
AKJX5004D	Duplicate of AKJX5004
AKJX5005	Monitoring Well #2
AKJX5006F	Field Blank

TABLE 2: GROUNDWATER FIELD PARAMETERS

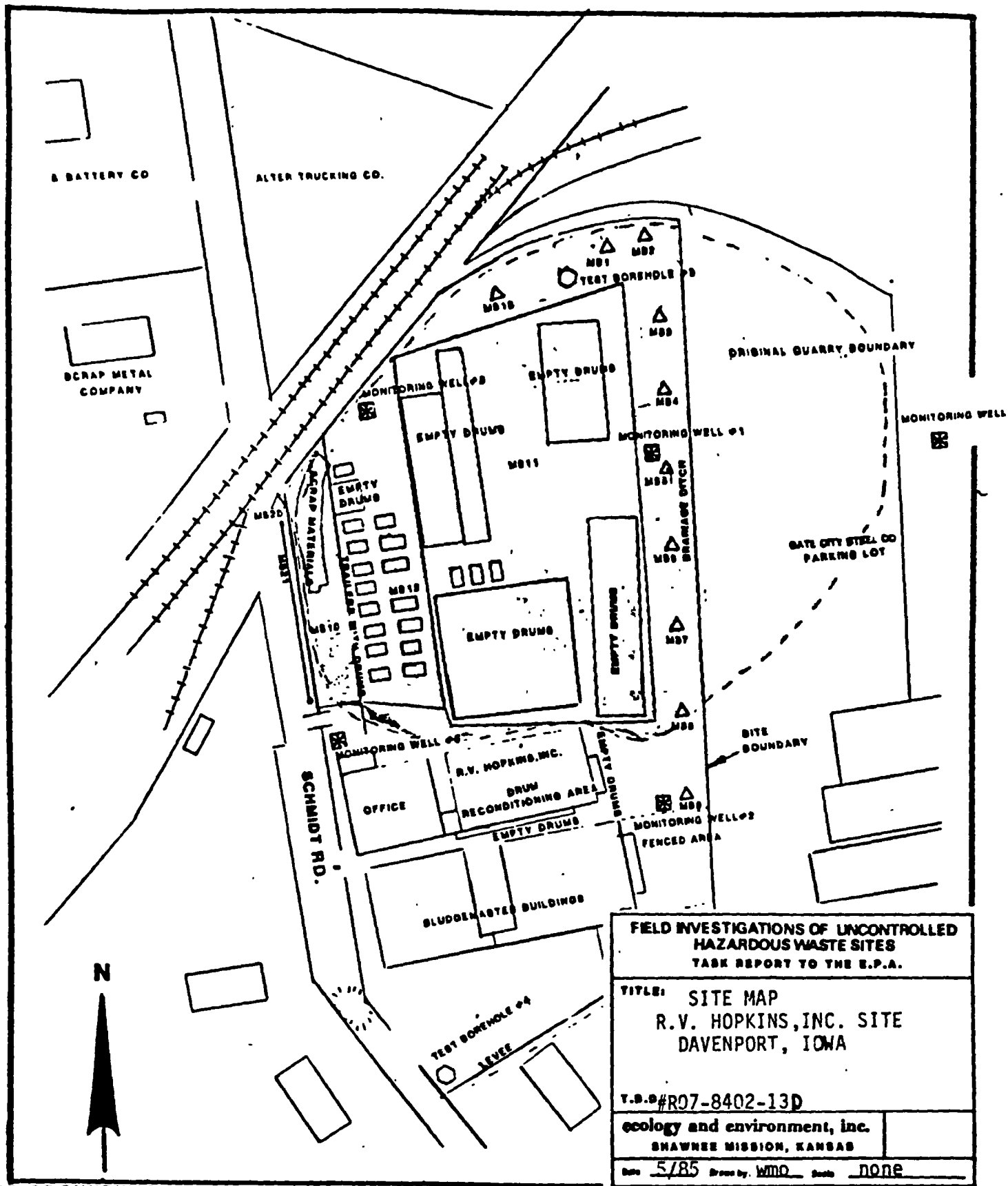
R.V. Hopkins, Inc. Site

Davenport, Iowa

TDD #R07-8402-13D

<u>Location</u>	<u>Temperature</u>	<u>pH</u>	<u>Conductivity* (umhos)</u>
Monitoring Well #4	9°C	6.0	1100
Monitoring Well #5	8°C	6.0	1100
Monitoring Well #3	8°C	6.5	600
Monitoring Well #1	10°C	7.5	700
Monitoring Well #2	11°C	6.5	1200

\* - field values - uncorrected.



N



GROUNDWATER SAMPLE

**FIELD INVESTIGATIONS OF UNCONTROLLED  
HAZARDOUS WASTE SITES  
TASK REPORT TO THE E.P.A.**

**TITLE:** SITE MAP  
R.V. HOPKINS, INC. SITE  
DAVENPORT, IOWA

**T.S.#** R07-8402-13D

**ecology and environment, inc.**  
SHAWNEE MISSION, KANSAS

**Date** 5/85 **Drawn by** WMO **Scale** none

**Final Report of the  
R.V. Hopkins, Inc., Site Investigation  
Davenport, Iowa**

**TDD# R-07-8402-13A**

**February 13, 1985**

**Submitted to: Paul E. Doherty, ARPO  
Prepared by: Region VII REM/FIT  
Task Leader: William M. Oberle, FIT**

## SECTION 1: INTRODUCTION

The Ecology & Environment, Inc. Field Investigation Team (FIT) was tasked by the Region VII U. S. Environmental Protection Agency (EPA) to conduct a site investigation of R. V. Hopkins, Inc. site in Davenport, Iowa. The work was conducted under Technical Directive Document (TDD) #R-07-8402-13A dated April 25, 1984.

R. V. Hopkins, Inc. is a drum recycling operation located on the site of a former limestone quarry. U.S. EPA conducted a previous site inspection with limited sampling which concluded that the possibility existed for the offsite migration of contaminants (15). These contaminants were generated by Hopkins' past waste disposal practices.

The objective of this site investigation is to evaluate the extent and/or the potential for the contaminant migration via groundwater, surface water and air routes. The scope of work included the following tasks: 1) the collection of sediment, surficial soil, and groundwater samples; 2) the installation of five monitoring wells and the drilling of 2 test boreholes; and 3) the submission of a final report after the receipt of data.

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## SECTION 2: SITE GEOLOGY AND HYDROLOGY

### 2.1 SOIL CHARACTERISTICS

The general soil of the area was referenced in the initial site inspection as a Wabash silty loam (15). The permeability ranges from  $10^{-3}$  to  $10^{-6}$  cm/sec. (moderately permeable). The test borings and monitoring well drilling logs (Appendix C) have shown that the soil on- and offsite varied from dark brown to gray clayey silt to gray silty clay (1). The undisturbed nature of the soil layers encountered in the drilling of Monitoring Wells (MW#) #2, #4 and #5 (Figure 1 and 1A), indicates that these wells were located in areas which were not part of the former limestone quarry. In addition, the offsite Test Borehole (TB) (#4) determined the soil there to be a brown to reddish-brown silty clay. The drilling log of an offsite well north of the site recorded the overburden as a dark brown silty soil (3). (See Table 2; p 4-5).

The floor of the former limestone quarry was reportedly at a depth of 60 feet below ground surface when operations were terminated by flood waters (2, 4, 5). The Corps of Engineers aerial photograph dated 1929, Figure 2, showed that the former quarry occupied most of the present Hopkins' property and the approximate western half of the Gate City Steel Co. north parking lot. In the photograph, the quarry

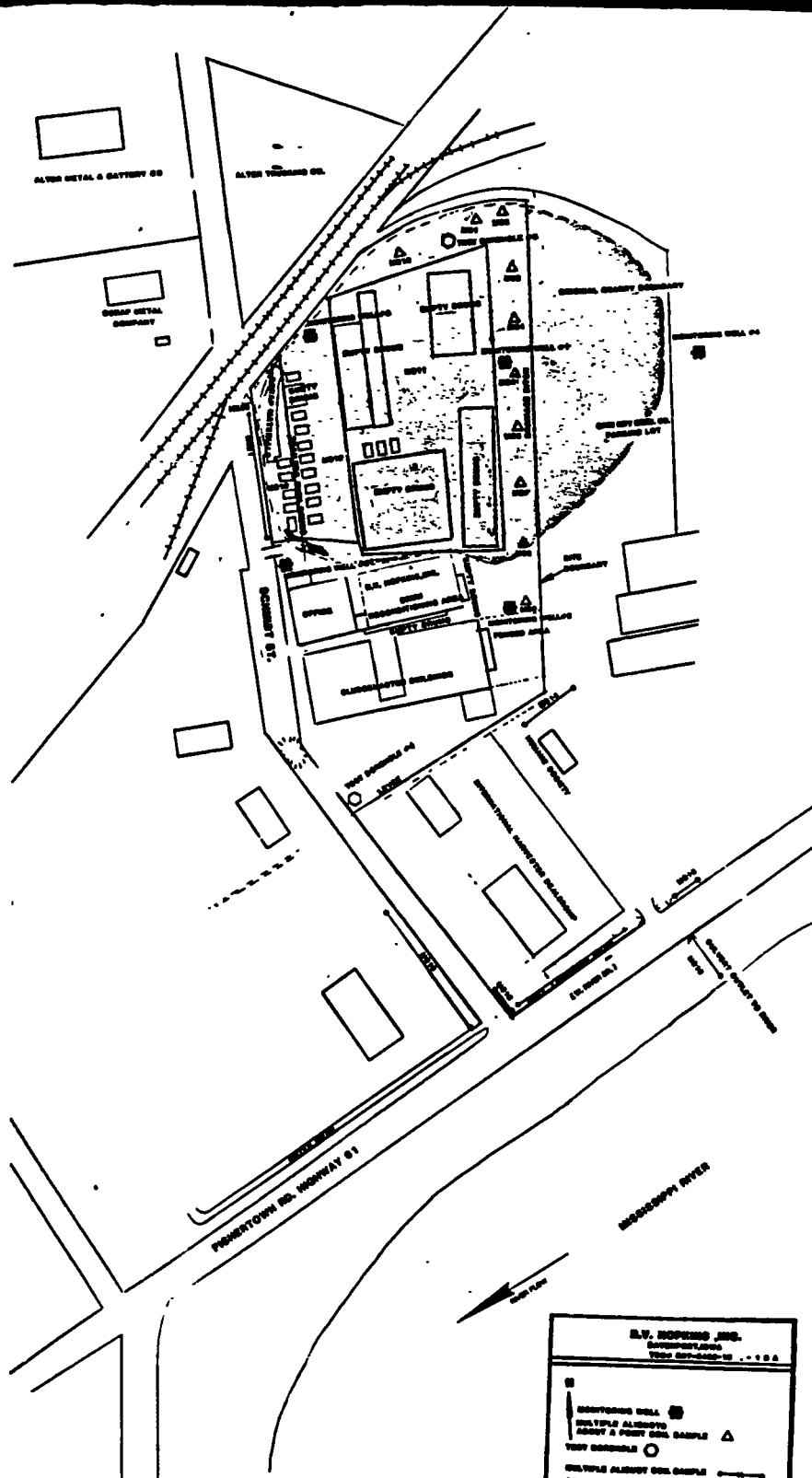
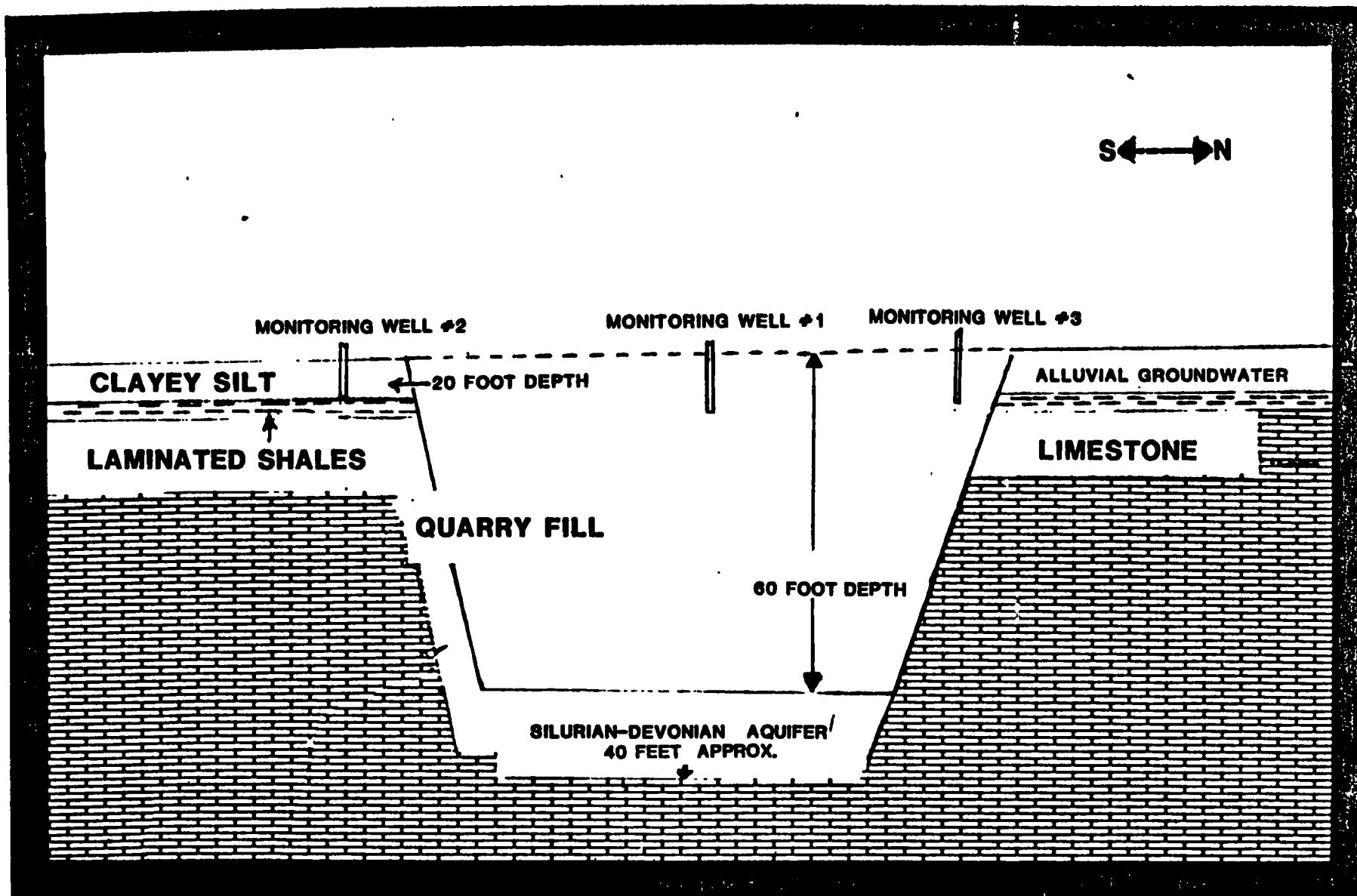


FIGURE 1: SITE MAP  
R. V. HOPKINS, INC. SITE  
DAVENPORT, IOWA  
TDD#R-07-8402-13A  
2-2



**FIGURE 1A**  
**SIDE-VIEW: R.V. HOPKINS, INC. SITE**  
**DAVENPORT, IOWA**  
**TDD#R07-8402-13A**

(NOT TO SCALE)

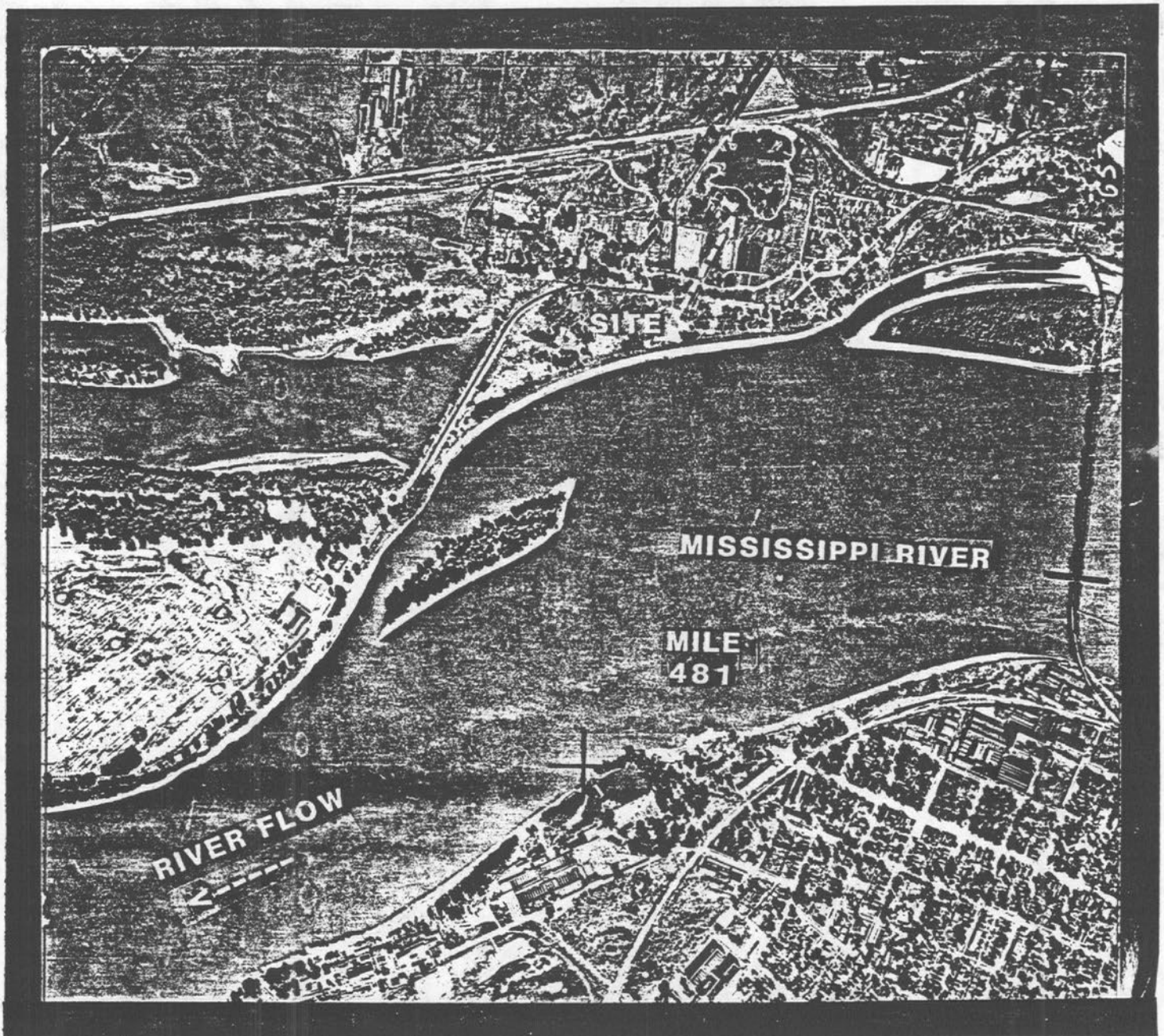


FIGURE 2

Aerial photograph of former quarry area illustrating its dimensions.  
Scale: 1 inch=1,000 ft.

U.S. Army Corps of Engineers; 1929

was filled with water to near ground surface levels (2). By 1977 (See Appendix E), the majority of the quarry had been filled with demolition debris and other fill materials (4, 5, 6). This was corroborated by the split spoon samples and/or auger cuttings from the boreholes within the quarry area where fill materials were encountered to depths of 12-20 feet (1). The Gate City Steel Company's portion of the quarry was partially filled with acetylene production wastes ( $\text{CaCO}_3$ ) and with fill soil from an offsite location (5).

## 2.2 BEDROCK STRATA

According to an Iowa Department of Transportation engineer and the Gate City Steel Company plant manager, bedrock is encountered south of the site at depths of 3 to 6 feet (5, 8). This limestone shelf reportedly parallels the Mississippi River in the area east of the site. Borings into natural soil formations detected bedrock of gray weathered interbedded shales and limestone at depths of 6 - 16.9 feet (See Figure 1 and 1A) which were overlain by a thin layer of laminated claystone (1).

The upper bedrock formation is the Devonian-age Wapsipinicon limestone Formation with a thickness of 85 feet, as evidenced by the well log of the A. D. Heusing Bottling Works, Inc. well (approximately 1500 feet north of the site) (3, 7). The upper elevation of the formation varies between 548 to 565 feet (1, 11) in the area of the site to 490 feet  $\pm$  10 feet in areas inside a buried river

channel north to northwest of the site (7). The Silurian-age Niagaran Series limestones and dolomites occur between 465 feet to 217 feet elevation (3). The Wapsipinicon and the Niagaran Formation comprise the Silurian-Devonian aquifer in this portion of east-central Iowa. This aquifer is the major source of potable groundwater in the area (11). According to the Iowa Geological Survey, the alluvial aquifer and the Silurian-Devonian aquifer are in hydrologic connection and most surficial contaminants would be expected to follow the water table of the area and flow towards the Mississippi River (7).

Borings drilled within the estimated boundaries of the filled-in former quarry encountered refusal at depths ranging from 15 to 21 feet below existing grade. Refusal may have occurred on concrete rubble or on the limestone of the Wapsipinicon Formation. In either case confirmation of the reported 60 foot depth of the former quarry would require rock coring supplemented with a geophysical survey using seismic refraction techniques. The presence of the former quarry may provide a migration route to other portions of the aquifer (Figure 1A) which may be utilized as drinking water or commercial sources of potable water. This is due to the aquifer's porosity and permeability which are dependent upon secondary rock openings which are randomly oriented and variable in size, extent and frequency of occurrence (11). In addition, these rock openings have been enlarged by dissolution by groundwater circulation during

the pre-Pleistocene time period. Due to the limestone quarry and secondary structures of the bedrock aquifer, the potential for contaminate migration exists.

### 2.3 GROUNDWATER DEPTH AND PHYSICAL CHARACTERISTICS

Groundwater was detected in the onsite wells and test boring at depths varying between 3.5 and 8 feet. MW#1, MW#2 and MW#5 encountered groundwater at depths of 5 to 6 feet. MW#3 encountered groundwater at 3.5 feet and TB#3 recorded groundwater at a depth of 8 feet. The offsite well (MW#4) and test borehole (TB#4) remained dry at the time of drilling. MW#4 later recorded a static water level of 0.7 feet after a heavy rain (14).

The groundwater was physically characterized prior to the commencement of sampling on June 8, 1984. The wells ranged in pH from 7.0 - 7.2 except for MW#3 which was slightly acidic (pH 6.0) (See Table 1). MW#3 and MW#4 showed the lowest conductivity and MW#5 had the highest conductivity (See Table 1).

TABLE 1: GROUNDWATER DEPTH AND PHYSICAL CHARACTERISTICS  
R. V. HOPKINS, INC. SITE  
DAVENPORT, IOWA  
TDD #R-07-8402-13A

	<u>MW#1</u>	<u>MW#2</u>	<u>MW#3</u>	<u>MW#4</u>	<u>MW#5</u>
pH	7.0	7.2	6.0	7.0	7.0
Temp. (C.)	14.5	14.0	14.5	14.0	14.5
Conductivity umhos (temp. corrected)*	971	1000	714	724	1221
Groundwater Depth (ft.); (during drilling)	6.0	5.0	3.5	(dry)	6.0
Static Water Level (ft.)	1.7	3.42	4.08	0.7	4.67

\*Note: 1413 umhos KCl Standard used.

### SECTION 3: ENVIRONMENTAL PARAMETERS

The mean annual precipitation for the Davenport, Iowa area is 32 inches/year with a mean annual lake evaporation of 35 inches/year. The resulting net annual precipitation is -3 inches/year (10, 11). The 1-year 24-hour rainfall is 2.75 inches (10). The 5-year 24-hour rainfall is 4.0 inches (11). The average annual runoff for the Davenport area is 7 inches/year.

The nearest surface water is the Mississippi River which is approximately 800-900 feet east of the site (Figure 3) (12). The onsite slope is <2% and the intervening terrain is also <2% (12). While the slope of the site and the intervening terrain is slight, some runoff from the site has occurred in the past and provides a potential migration route for surface water contamination (14, 15).

The latitude and longitude of the site is as follows: Latitude: 41° 30' 37" North; Longitude: 90° 36' 28" West (13).

The prevailing winds of the area are nearly evenly distributed between the east, west and south at the most common velocity range of 4 - 13 mph (annual average) (16). The westerly winds have recorded the highest velocities in the 31 - 35 mph category. These relatively strong winds may provide an air route contaminant migration problem for contaminated fines or vapors present or generated on the site.



U.S.G.S TOPOGRAPHIC MAP 1975

Davenport, Iowa-East Quadrangle 1:24,000 Scale

R. V. Hopkins, Inc. - Site #45

TDD# R07-8402-13A

FIGURE 3

## SECTION 4: MONITORING WELL INSTALLATION

A total of five monitoring wells and two test boreholes were drilled at the Hopkins site between June 5 - 7, 1984. These locations are marked on the site map (Figure 1).

### 4.1 MONITORING WELL LOCATIONS

Monitoring Well #1 is located onsite approximately 15 feet west of the present east property line and 200 feet south of the north site boundary. Monitoring Well #2 is located east-southeast of the Drum Reconditioning Building and immediately north of the "fenced area" east of the Sludgemaster Building. Monitoring Well #3 is also onsite near the north property line. Monitoring Well #5 is situated approximately 10 feet southeast of the northernmost gate along Schmidt Street. The location of the single offsite well, Monitoring Well #4 (MW#4) was east of MW#1 and approximately 30 feet east of the edge of the Gate City Steel Company parking lot. This well serves as an upgradient offsite background for the onsite wells.

The onsite wells (MW#1 and MW#3) were located so as to measure contaminant concentrations within the former quarry and to determine alluvial groundwater flow direction.

### 4.2 MONITORING WELL DRILLING AND INSTALLATION

The monitoring wells were drilled using hollow stem augers. All wells were drilled to bedrock or refusal. No

drilling muds were used and only potable city water was used during the drilling operations. The drilling rig and its attendant augers were initially decontaminated prior to the start of operations. Augers were decontaminated with steam, followed by a methanol rinse and deionized water rinse. The augers were also decontaminated between each well. All well screen and pipe were decontaminated prior to installation.

After bedrock (or refusal) was reached, 10 feet of capped well screen (.010 inch slot) was placed in the borehole and pea gravel added around the well screen (See Figure 4). The Schedule 40 2-inch I.D. PVC casing was flush threaded and no solvent welding was used. The gravel was added in 1 - 2 foot increments as the hollow stem augers were withdrawn. Each well was gravel packed to a depth of 1 - 3 foot above the top of the well screen. A 2 foot bentonite pellet seal was added and the remainder of the borehole was completed with a cement-grout mixture to the surface. A 5 inch diameter steel casing of 5 foot length was placed around the PVC casing and set into a one foot depth of concrete. Each protective casing was painted and numbered. Each well was equipped with a dedicated PVC bailer and the inner casings were equipped with a vented cap.

A large void in the quarry fill material was encountered during the gravel packing of MW#3. This necessitated the use of 1400 lbs. of gravel from a nearby distributor in order to fill the void. A sample of this gravel

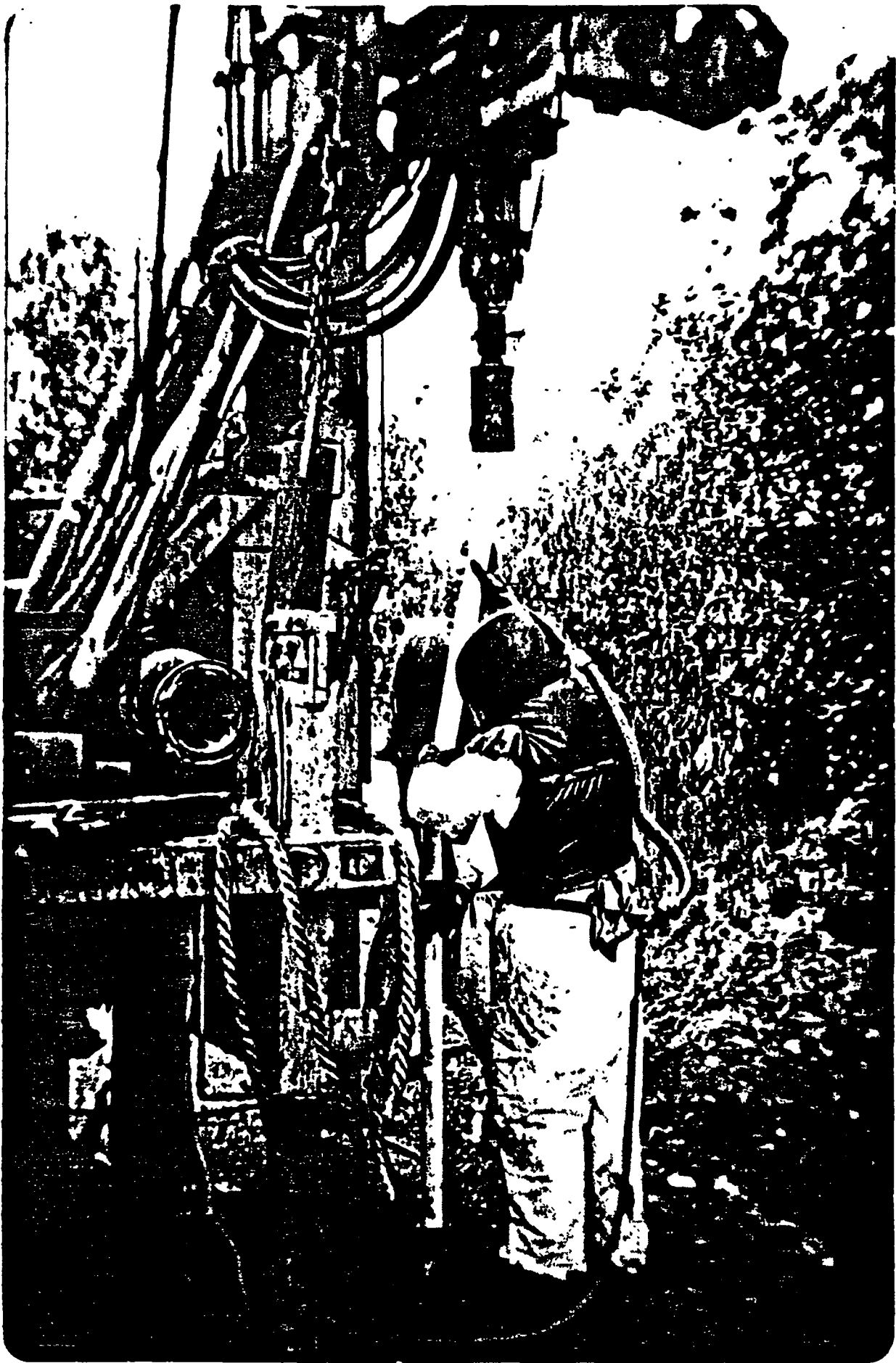


FIGURE 4: Emplacement of Monitoring Well #1.  
R. V. HOPKINS, INC. SITE  
TDD#R-0708402-13A; p.4-3.

was collected for quality control purposes (EPA Sample # AQ0618).

#### 4.3 MONITORING WELL SAMPLING - SEDIMENTS

A total of 16 subsurface sediment samples were collected during the drilling operations. The samples were collected with two 3-inch O.D. split spoon samplers of 18 and 24 inch length using a 140 lbs. weight with a free-fall of 30 inches. The split spoon samplers were decontaminated prior to and between each sampling.

Sample cores were opened on a clean sheet of plastic and two inches were removed from both ends of the spoon. A clean stainless steel tablespoon was used to divide the sample core along the long axis. One half of the core was placed in a one pint glass jar, labelled, and submitted for priority pollutant analysis (acids, base/neutrals and pesticide fractions). The second half of each core was packaged in the same manner and submitted for total metals analysis (task 1 and 2).

Split spoon samples were collected at five foot intervals to bedrock or refusal. The sediment sample collected at 10 - 11.5 feet from MW#3 was analyzed for priority pollutants - extractable organics only because of a poor sample return (See Table 2).

The boreholes were monitored with a photoionizing organic vapor monitor (HNU) equipped with a 10.2 eV probe and calibrated in benzene equivalents. In addition, the boreholes were monitored for cyanides using a Draeger pump

fitted with HCN tubes. All monitoring equipment was calibrated daily and background ambient air readings were recorded. (See Table 2 for organic vapor levels.)

#### 4.4 MONITORING WELL SAMPLING - GROUNDWATER

The initial groundwater samples were collected from MW#'s 1-5 on June 8, 1984. Monitoring wells were purged and sampled on the same day, allowing approximately 3 hours for recharge. Each monitoring well was surveyed with a HNu equipped with an 11.7 eV photoionizing probe and calibrated in benzene equivalents prior to purging. The only well in which any organic vapors were detected above 0.0 ppm was MW#3 (0.2 ppm). The 11.7 eV unit was used because of moisture damage to the 10.2 eV unit on June 7, 1984.

Each well was purged of approximately 35 gallons of water. It was noted that purging did not significantly decrease the water levels in any of the monitoring wells. It also should be noted that MW#4, which was dry when drilled, contained water after the rainfall of the previous day.

At each well, the following collections were made: 1) 2-1/2 gallons opaque glass jars for priority pollutants - (acids, base/neutrals and pesticide fractions); 2) two 40 ml. VOA vials for volatile organics; 3) a 1-quart cubitainer for total metals (task 1 & 2), filtered and preserved with nitric acid ( $\text{HNO}_3$ ) to a pH 2.0 and; 4) a 1-quart cubitainer for physical testing (see Table 1). All water samples were stored on ice until relinquished to the U.S. EPA Laboratory in Kansas City, Kansas, on June 11, 1984. A field blank (AQ0646) was also submitted for volatile organics analysis.

TABLE 2: DESCRIPTION OF SUBSURFACE SEDIMENTS  
R. V. HOPKINS, INC. SITE  
DAVENPORT, IOWA  
TDD #R-07-8402-13A

<u>Sample #</u>	<u>Location</u>	<u>Depth (ft.)</u>	<u>Description</u>	<u>Comments</u>	<u>Analysis</u>
AQ0600	MW#1	5-7	Fill, rubble, sand, wire	HNu = 0.0 ppm	PP, TM
AQ0601	MW#2	10-12	Same as above	HNu = 5 ppm	PP, TM
AQ0602	MW#1	15-17	Gray sand and gravelly silt		PP, TM
AQ0603	MW#1	20-20.3	Same as above	Refusal at 21.7 ft.	PP, TM
AQ0614	MW#2	5-7	Dk. brown clayey silt	HNu = 0.0 ppm	PP, TM
AQ0615	MW#2	10-12	Gray clayey	HNu = 0.0 ppm	PP, TM
AQ0616	MW#2	15-17	Silt, bedrock	Interbedded weathered, limestone & shale.	PP, TM
AQ0606	MW#3	5-6.5	fill, sandy silty, clay, clayey silt, Dk. Brn. to Brn.	HNu = 0.0 ppm	PP, TM
AQ0607	MW#3	10-11.5	Same as above with flyash & rubble.	Borehole re-located 2.5 ft. north-rejection.	PP
AQ0608	MW#3	15-18	Fill, sandy silt, Dk. gray.	Rod dropped 8 ft. in 2 blows. HNu = 0.4 ppm.	PP, TM
AQ0609	MW#3	20-21.5	Same as above & bedrock.	Gray weathered limestone.	PP, TM
AQ0604	MW#4	5-7	Brn. clayey silt, gravel.	HNu = 1.5-2 ppm.	PP, TM
AQ0605	MW#4	10-12	Gray silty clay, trace sand.	HNu = 1 ppm Bedrock at 15 ft. Weathered shaley limestone.	PP, TM
AQ0610	MW#5	5-7	Fill, Dk. Brn. silty clay.	No HNu reading taken.	PP, TM
AQ0611	MW#5	10-12.5	Gray silty clay.		PP, TM
AQ0612	MW#5	15-16.9	Gr. silty clay to interbedded weathered limestone & shale.		PP, TM

\*PP = priority pollutants (acids, base/neutrals and pesticides fractions) analysis

\*TM = total metals analysis (task 1 and 2)

Dk = dark

Brn = brown

Gr = gray

## SECTION 5: SURFICIAL SOIL SAMPLES AND SPECIAL SAMPLES

Surficial soil samples were collected from areas on- and offsite for the following reasons: 1) to ascertain what contaminants were present in the shallow soil layer onsite; 2) to establish background levels for comparison purposes; and 3) to determine, if possible, what contaminants may have migrated offsite in the past and what concentrations presently remain in nearby soils. All soil samples were 0 - 6 inches in depth and of multiple aliquots each. All soil samples were placed in one pint glass jars and submitted for the following analyses:

- 1) Priority Pollutants - extractable organics (acids, base/neutrals and pesticide fractions)
- 2) Total Metals - Task 1 and 2

The soil samples were packaged as medium hazard samples and were delivered to the U. S. EPA Laboratory in Kansas City, Kansas on June 11, 1984.

The sampling technique remained the same for all soil sample locations. In each case, a pick was used to dig a small trench and a stainless steel spoon was used to collect the soil aliquot. Each sample's aliquots were manually homogenized in a stainless steel pan and placed in two 1-pint glass jars for priority pollutant and total metals analyses. Each soil sample location was given the designation (MS#) for reference purposes (See site map).

### 5.1 ONSITE SOIL SAMPLING LOCATIONS

A total of 15 onsite soil samples were collected on the R. V. Hopkins, Inc. property (See Figure 1). Of these 15 soil samples, 13 samples were collected inside the fenced area of the site. Two (2) soil samples were collected on the Hopkins property which parallels Schmidt Street. Sample location (MS20) was comprised of ten aliquots about a central point. Immediately to the south, sample location (MS21) was a linear 120 foot, ten aliquot shallow soil sample. These two samples were collected to assist in determining if surface water runoff from the site contained significant levels of contaminants. Soil sample locations MS10 - 12 were multiple aliquots which were collected from central areas of drum storage (See Figures 1 and 5). All of the remaining onsite soil samples were of multiple aliquots about a central point (See Figures 1 and 6). For a further description of onsite soil sample locations, refer to Table 3; p. 5-3.

### 5.2 OFFSITE SOIL SAMPLING LOCATIONS

Sample locations MS14 - 19 were offsite surficial soil/runoff sediment samples. These samples were located in areas where contaminants would be expected to be deposited due to runoff from the site. In general, these areas parallel Schmidt Street, south of the site and were also located along the north side of Highway 61 (West River Dr.). In addition, sample location MS14 was near the Humane Society building, southeast of the site. The culvert outlet to the Mississippi River, south of Highway 61 was also sampled. See Table 4 (p. 5-6) for a further description of offsite sample locations and corresponding EPA sample numbers.

TABLE 3: ONSITE SOIL SAMPLE LOCATIONS

<u>SAMPLE LOCATION #</u>	<u>EPA SAMPLE #</u>	<u>LOCATION DESCRIPTION</u>
MS1	AQ0628	NW corner of triangular depressed area.
MS2	AQ0629	NE side of triangular depressed area.
MS3	AQ0630	Adjacent to east ditch 100 ft. south of MS2.
MS4	AQ0631	Adjacent to east ditch and south of MS3.
MS5	AQ0632	Adjacent to east ditch and 100 ft. south of MS4.
MS6	AQ0633	Adjacent to east ditch and south of MS5.
MS7	AQ0634	Adjacent to east ditch and south of MS6.
MS8	AQ0635	Adjacent to east ditch and Recondition. Bldg.
MS9	AQ0636	Adjacent to east ditch and 50 ft. south of MS8.
MS10	AQ0643	Area of west row of trailers.
MS11	AQ0645	Central area between drum stacks.
MS12	AQ0642	Area of east row of trailers.
MS13	AQ0644	Northwest area between drum stacks; south and east of MW#3.
MS20	AQ0621	200 ft. shoulder segment; east side of Schmidt Street.
MS21	AQ0620	SE of intersection of Schmidt St. and Gate City Steel Co. road; 5 ft. radius sample area.

5-4



FIGURE 5: South central drum storage area. Direction; South-Southeast.

R.V. HOPKINS, INC. SITE  
DAVENPORT, IOWA  
TDD#R-07-8402-13A

5-5



FIGURE 6:East drainage ditch;North from Monitoring Well #1.

TABLE 4: OFFSITE SOIL SAMPLE LOCATIONS

<u>SAMPLE LOCATION #</u>	<u>EPA SAMPLE #</u>	<u>LOCATION DESCRIPTION</u>
MS14	AQ0627	SE of site and adjacent to Humane Society and Gate City Steel
MS15	AQ0626	280 ft. shoulder segment; west side of Schmidt St.
MS16	AQ0625	50 ft. shoulder segment; east side of Schmidt St.
MS17	AQ0624	Drainage ditch; north side of Hwy. 61 and NE of Schmidt St.
MS18	AQ0623	50 ft. segment; drainage ditch east of culvert and north of Hwy. 61.
MS19	AQ0622	50 ft. segment; culvert outlet to Mississippi River.

### 5.3 SPECIAL SAMPLES

Two samples were collected as a quality assurance measure to ensure that no contamination was introduced during the field investigation. EPA sample number AQ0617 was a composite water sample which had been allowed to remain in the PVC bailers overnight. Initially, the bailers were decontaminated using a soap and water wash, a steam rinse, a methanol rinse and a deionized water rinse. The ends of the bailers were sealed with aluminum foil after each was filled with clean deionized water. The sample was composited from each of the bailers. The sample was analyzed for priority pollutants - acids and base/neutrals fractions. The purpose of the sample was to ensure that decontamination procedures had been successful and that, under neutral pH conditions, no priority pollutant chemicals would be leached from the PVC bailers by water alone.

The second quality assurance sample (AQ0618) was collected from the gravel used in packing Monitoring Well #3. This sample was also analyzed for priority pollutants - acids, base/neutrals and pesticide fractions. The purpose of the sample was to ensure that no outside contaminants were introduced into the well.

## SECTION 6: DATA RESULTS AND INTERPRETATION

### 6.1 SEDIMENTS

#### 6.1.1 Total Metals

All of the sediment samples collected during the drilling of the monitoring wells detected the presence of heavy metals. The primary metals of interest were arsenic, barium, cadmium, chromium (total), cobalt and lead. Arsenic, cadmium, cobalt and lead were chosen because of their toxicity and environmental persistence. Barium was of interest because of its toxicity and because of its influence on pH and metals solubility in water as well as their adherence to soil particles. Chromium (total) was chosen as an indicator of its more persistent and hazardous form -  $\text{Cr}^{+6}$  - which may be present.

In general, the overall horizontal distribution of metals in the sediments decreased from the center of the former quarry area and the eastern boundary of the site to the northern edge of the quarry area. A significant decrease in metal contaminants was detected at the western property boundary (MW#5) although metals concentrations are still higher than those detected in MW#2. The sediments of the offsite well (MW#4) and the well near the south property boundary contained the lowest concentrations of metals.

The metals concentrations, in general, increase with depth to the 10-12 foot or 15-17 foot layers and then decrease significantly (See Table 5). This is especially true of MW#1,

TABLE 5: TOTAL METALS DATA  
R.V. Hopkins, Inc. Site  
Davenport, Iowa  
TDD #R-07-8402-13A

Sediment

<u>Sample #</u>	<u>Loc. #</u>	<u>Depth (ft.)</u>	<u>As+</u>	<u>Ba</u>	<u>Cd</u>	<u>Cr</u>	<u>Co</u>	<u>Pb</u>
AQ0600	MW#1	5 - 7	4.0	83.	0.6	140.	5.5	860.
AQ0601	MW#1	10 - 12	2.4	110.	0.9	230.	4.9	2000.
AQ0602	MW#1	15 - 17	5.5	82.	9.4	260.	14.0	3700.
AQ0603	MW#1	20 - 20.3	1.9	17.	0.4	18.	0.0	830.
AQ0604*	MW#4	5 - 7	5.0	110.	0.38	19.	7.1	92.
AQ0605*	MW#4	10 - 12	0.6	14.	0.0	6.3	9.8	6.4
AQ0606	MW#3	5 - 6.5	3.0	200.	1.9	160.	8.4	1200.
AQ0607	MW#3	10 - 11.5	(No Metals Sample - Poor Return)					
AQ0608	MW#3	15 - 18	28.0	100.	9.6	67.	5.3	1800.
AQ0609	MW#3	20 - 21.5	6.3	98.	0.95	33.	6.8	200.
AQ0610	MW#5	5 - 7	1.9	120.	0.32	21.	6.4	10.
AQ0611	MW#5	10 - 12.5	4.0	180.	0.34	19.	14.0	7.4
AQ0612	MW#5	15 - 16.9	3.0	180.	0.25	15.	9.5	50.
AQ0613	MW#5		(No Sample - Poor Return)					
AQ0614	MW#2	5 - 7	2.5	140.	1.5	16.	10.0	640.
AQ0615	MW#2	10 - 12	2.0	8.3	0.38	19.	6.8	530.
AQ0616	MW#2	15 - 17	1.5	32.	0.1	6.5	5.5	15.

\* = Offsite Sample

+ = Values in parts per million (ppm)

MW#3 and MW#5 which were wells within the known fill area and immediately west of it. MW#2 and MW#4 tend to show a decrease in metals concentration with increasing depth. The fact that these trends are not completely uniform throughout the different sediment layers reflects the heterogeneous nature of the fill materials.

Using the values of MW#4 as a baseline, the concentrations of lead, chromium, cadmium and to a lesser degree, cobalt, barium and arsenic, are significant. This is particularly true since the highest concentrations of lead, cadmium, chromium, cobalt and arsenic were detected in sediments at depths which would be in communication with the alluvial aquifer.

#### 6.1.2 Organic Priority Pollutants

A wide variety of priority pollutant contaminants were detected in the volatile, acids, base/naturals and pesticide fractions of the onsite sediments (See Table 6). No priority pollutant contaminants were detected in the sediments of MW#2 or MW#4.

The distribution of these contaminants followed a similar pattern as was detected in the metals fractions of the analysis. The central and northern monitoring well sediments (MW#1 and MW#3) inside the former quarry contained the widest variety and the highest concentrations of each chemical. The sediments from MW#5, on the western portion of the property and immediately outside the former quarry area, detected a smaller variety of organic chemicals and at lower concentration levels.

TABLE 6: PRIORITY POLLUTANTS DATA

R.V. Hopkins, Inc.

Davenport, Iowa

TDD# R-07-8402-13A

## SEDIMENT

		<u>Ethylbenzene</u>			
		5-7'	10-12'	15-17'	20-21'
MW#1		4.5*+	0.0	17.0	0.0
MW#3		0.047	0.0	0.0	0.0
		<u>o-Xylene</u>			
MW#1		12.0	8.8	290	0.0
MW#3		0.15	0.0	0.0	0.0
		<u>Naphthalene</u>			
MW#1		0.7	25.0	62.0	1.2
MW#3		1.6	0.0	0.0	0.0
		<u>Chlordane</u>			
MW#1		3.9	0.2	0.0	0.43
MW#3		0.0	0.12	0.0	0.0
		<u>Bis-2 (ethylhexyl) phthalate</u>			
MW#1		1.4	3.4	1,300.00	1.6
NW#3		1.6	0.93	0.0	0.0
		<u>Phenanthrene</u>			
MW#1		0.0	0.0	40.0	0.0
MW#5		0.32	0.0	0.0	NC
		<u>2-Methylnaphthalene</u>			
MW#1		0.0	8.4	74.0	0.0
MW#3		0.55	0.0	0.0	0.0
		<u>Fluoranthene</u>			
MW#5		0.38	0.0	0.0	0.0
		<u>Endrin</u>			
MW#3		0.12	0.0	0.0	0.0
		<u>PCB 1254</u>			
MW#1		0.62	0.13	0.0	0.0
MW#3		0.14	0.0	0.0	0.0
		<u>Phenol</u>			
MW#3		0.0	NC	0.0	0.78

\* = all values in parts per million

+ = value approximate

NC = Not Collected

Where organic contaminants were detected in two or more of the sediment samples in a well, the concentration values generally increased with depth. Chlordane and PCB 1254 were two of the organic contaminants which decreased with depth. The reason is unknown at this time but may be related to the time period of disposal and/or the individual solubilities of these chemicals (See Appendix F for the chemical characteristics). Several of the contaminants were detected at only one location or at only one depth (e.g., Endrin, fluoranthene). However, these chemicals were also detected at multiple shallow soil sampling locations (See Section 6.3.2). This appears to indicate that some vertical movement has occurred.

The highest concentration values recorded was for Bis-(2-ethylhexyl) phthalate at 1,300 ppm followed by o-xylene at 290 ppm. These values were exceptionally high when compared to the majority of the values recorded for the sediments. The second group of values ranged from 12 ppm to 74 ppm. These values were predominantly in the 15-17 foot sediment layer (ethylbenzene, naphthalene, phenanthrene, 2-methylnaphthalene), naphthalene at the 10-12 foot layer of MW#1, and o-xylene at the 5-7 foot layer. The majority of values ranged from 0.047 ppm to 8.8 ppm. These twenty-five values were primarily located in the upper 5-7 foot and 10-12 foot layers.

## **6.2 GROUNDWATER DATA**

### **6.2.1 Total Metals**

Several metals were detected at low concentrations in the onsite groundwater samples. The offsite groundwater sample did not detect the presence of any metals.

Arsenic was detected in the groundwater of MW#2 and MW#3 at 0.02 ppm. Barium concentrations were significantly higher at 0.2 ppm in MW#1, MW#2, and MW#3 and at 0.3 ppm in MW#5. Lead was detected at 0.022 ppm in MW#1 and at 0.120 ppm in MW#5. Cadmium, chromium and cobalt were not detected in any of the groundwater samples. Barium is generally more water soluble than the other metals and was therefore detected more frequently and at higher concentrations (See Appendix F for chemical characteristics).

While these concentrations were relatively low, it should be remembered that this was an initial, single round of sampling and therefore may not be truly representative of the metals concentrations present in the groundwater.

### **6.2.2 Organic Priority Pollutants**

The initial groundwater sample from MW#1 detected o-xylene at approximately 0.09 ppm and at 0.10 ppm in MW#3. This chemical was not detected in any of the other groundwater samples.

Chloroform was detected in three of the groundwater samples. These concentrations were as follows:

MW#2 - 0.017 ppm+  
MW#4 - 0.015 ppm+  
MW#5 - 0.008 ppm+  
+ = value approximate

It should be noted that; 1) none of the above locations are within the fill area and 2) the concentration level decreased in a west to northwesterly directions.

Traces of chloroethane was detected in MW#1 at approximately 0.0097 ppm. Trans 1,2-dichloroethane was also detected in MW#4 at approximately 0.0055 ppm (See Appendix F for chemical characteristics).

Table 6.a  
Volatile Organics in Groundwater, ppm

Well No.	<u>o-Xylene</u>	<u>Chloroform</u>	<u>Chloroethane</u>	<u>Trans 1,2-Dichloroethane</u>
MW-1	0.09	—	0.0097	—
MW-2	—	0.17	—	—
MW-3	0.10	—	—	—
MW-4	—	0.015	—	0.0055
MW-5	—	0.008	—	—
<u>Criteria</u>				
EPA SNARLS, ppm	0.62	—	—	—
Proposed Water Quality Criteria, ppm	—	0.00021	—	.00007

The concentrations of volatile organics detected in the groundwater were evaluated with respect to EPA Health Advisories or Suggested No Adverse Response Levels (SNARLS) for drinking water where no recommended minimum concentration was listed under a SNARL, the value from the Proposed Water Quality Criteria, EPA 1979 was used.

With respect to Federal drinking water standards, concentrations of chloroform and trans 1,2-Dichloroethane in groundwater samples exceeded the recommended levels.

### 6.3 SURFICIAL SOILS

#### 6.3.1 Total Metals

Metals were detected in a wide range in all soil samples collected on- and offsite (See Table 7). Lead values onsite ranged from 230 - 20,000 ppm. However, the majority of the 15

TABLE 7: TOTAL METALS DATA  
R.V. Hopkins, Inc. Site  
Davenport, Iowa  
TDD #R-07-8402-13A

Surficial Soils

<u>Sample #</u>	<u>Loc. #</u>	<u>Depth (ft.)</u>	<u>As+</u>	<u>Ba</u>	<u>Cd</u>	<u>Cr</u>	<u>Co</u>	<u>Pb</u>
AQ0620	MS21	0 - 0.5	6.0	100.0	13.0	67.	16.0	1,900.
AQ0621	MS20	0 - 0.5	8.3	87.0	11.0	87.	25.0	1,300.
AQ0628	MS1	0 - 0.5	1.7	89.0	0.32	45.	5.8	230.
AQ0629	MS2	0 - 0.5	2.6	280.0	1.6	360.	14.0	20,000.
AQ0630*	MS3	0 - 0.5	2.1	380.0	2.7	850.	260	3,900.
AQ0631*	MS4	0 - 0.5	2.1	210.0	1.3	480.	12.0	2,700.
AQ0632	MS5	0 - 0.5	2.1	110.0	0.76	94.	6.2	1,500.
AQ0633	MS6	0 - 0.5	1.7	130.0	0.76	120.	5.0	1,500.
AQ0634	MS7	0 - 0.5	2.7	130.0	0.8	99.	7.0	1,400.
AQ0635	MS8	0 - 0.5	2.3	110.0	0.85	65.	5.5	1,900.
AQ0636	MS9	0 - 0.5	3.0	150.0	1.8	91.	9.5	2,400.
AQ0642	MS12	0 - 0.5	3.4	190.0	0.16	120.	12.0	5,800.
AQ0643	MS10	0 - 0.5	7.0	160.0	2.2	150.	10.0	13,000.
AQ0644	MS13	0 - 0.5	3.3	330.0	2.9	620.	24.0	8,400.
AQ0645	MS11	0 - 0.5	2.5	470.0	1.1	400.	12.0	4,900.
AQ0622*	MS19	0 - 0.5	3.0	73.0	2.1	13.	4.5	150.
AQ0623*	MS18	0 - 0.5	2.6	86.0	4.2	48.	11.0	770.
AQ0624*	MS17	0 - 0.5	4.2	150.0	8.3	72.	14.0	1,800.
AQ0625*	MS16	0 - 0.5	2.9	72.0	2.8	31.	9.2	510.
AQ0626*	MS15	0 - 0.5	3.4	150.0	9.2	83.	17.0	1,400.
AQ0627*	MS14	0 - 0.5	3.4	180.0	5.1	16.	9.5	350.

TABLE 8: TOTAL METALS DATA  
R.V. Hopkins, Inc. Site  
Davenport, Iowa  
TDD #R-07-8402-13A

Groundwater

<u>Sample #</u>	<u>Loc. #</u>	<u>Screen Range</u>	<u>As+</u>	<u>Ba</u>	<u>Cd</u>	<u>Cr</u>	<u>Co</u>	<u>Pb</u>
AQ0637	MW#1	6.7 - 16.7	0.0	0.2	0.0	0.0	0.0	0.022
AQ0638	MW#2	6.8 - 16.8	0.02	0.2	0.0	0.0	0.0	0.0
AQ0639	MW#3	6.3 - 16.3	0.02	0.2	0.0	0.0	0.0	0.0
AQ0640*	MW#4	5.0 - 15.0	0.0	0.0	0.0	0.0	0.0	0.0
AQ0641	MW#5	6.0 - 16.0	0.0	0.3	0.0	0.0	0.0	0.12

\* = Offsite Sample

+ = Values in parts per million (ppm)

onsite soil samples were found to range from 1,300 - 5,800 ppm. Sample locations MS2, MS10 and MS13 had the highest concentrations at 20,000 ppm, 13,000 ppm and 8,400 ppm respectively. These areas of high concentrations were in the trailer storage area and the north central drum storage areas. The low value of 230 ppm was located in the area where clean fill dirt had recently been added (MS1). Lead concentrations offsite ranged generally from 150 to 770 ppm. Two peak concentrations of 1,400 ppm (MS15) and 1,800 ppm (MS17) were recorded. Location MS15 received runoff surface water from the west side of Schmidt Street which may have included lead contaminated sediments from two scrap metal recyclers upslope. Location MS17 received runoff water and sediments from the east side of Schmidt Street and Highway 61. Possible sources of lead contamination are R.V. Hopkins, Inc. and the International Harvester dealership (gasoline spills). It should be noted that the background soil samples MS14 and MS18 detected lead concentrations of 350 ppm and 770 ppm respectively. Though these values are high, it must be remembered that the area surrounding the site is highly industrialized and subject to heavy vehicular traffic.

The other metals of interest were detected in ranges of 2 - 10 times greater onsite than in the offsite downslope sampling locations (See Table 7). Chromium and cobalt in particular were generally higher onsite at the northern locations than at locations nearer the south property line. This is a reflection of the major onsite drainage pattern which flowed toward the northeast corner of the site. The levels of

metals contamination have been found to be significant onsite which indicates that the site's location on the 10-year flood-plain could present a surface water migration hazard if surficial soils are carried from the site during flooding.

#### 6.3.2 Organic Priority Pollutants

The organic priority pollutants detected were from two major fractions: 1) the base/neutral fraction and; 2) the pesticide fraction. In addition, phenol was detected at seven onsite soil sampling locations. The areas of the highest organic contaminant levels were located in the north half of the site. This coincides with the onsite drainage pattern.

Values of the priority pollutant contaminants ranged from approximately 0.29 ppm to 1.4 ppm. Concentrations as high as 8.4 ppm (phenol and Endrin, 17-18 ppm Bis-(2 ethylhexyl) phthalate and Benzyl-butyl-phthalate and 29 ppm (PCB 1254) were recorded. Numerous polycyclic aromatic hydrocarbons (PAH's) were detected at or below 1 ppm in the offsite and downslope areas offsite. These PAH's included phenanthrene, fluoranthene, benzo (a) anthracene, chrysene, pyrene, and benzo (b or k) fluoranthene (See Appendix F for chemical characteristics; See Appendix D for sample data sheets). These materials have high octanol/water partition coefficients and a strong adherence to clays and organic particles.

The pesticide fraction of the soil samples contained chlordane, endrin, PCB 1248, PCB 1254 and PCB 1260. Values onsite ranged from 0.77 to 29.0 ppm. Offsite concentrations ranged from 0.11 to 0.53 ppm for PCB 1260, that being the only

chemical detected in both the on- and offsite soils. These materials are generally highly persistent in the soil environment and have high bioaccumulation factors (Appendix F).

The organic priority pollutants detected onsite could pose a threat to the aquatic environment and to nearby commercial fishing and shellfish industries during periods of flooding. The presence of the site on a 10-year floodplain would make the surface soils onsite subject to migration offsite.

#### 6.4 HYDROCARBONS

All samples were subjected to a GC/MS scan during the course of the priority pollutant analysis. Twenty of these samples, both sediment and surficial soils, detected the presence of a wide variety of hydrocarbons at significant concentration levels. However, these data figures recorded were of approximate value only.

These hydrocarbons appeared to be grouped in four major categories: 1) gasoline; 2) fatty acids; 3) heavy oils or waxes and; 4) unknowns.

The total concentrations of hydrocarbons per sample location are detailed in Table 8. The combined solution effects of the materials in water are quantitatively unknown but will tend to increase the migration rates of non-polar compounds.

TABLE 9

## TOTAL HYDROCARBON CONCENTRATIONS PER SAMPLE LOCATION

R.V. HOPKINS, INC.

DAVENPORT, IOWA

TDD# R-07-8402-13A

## SOIL AND SEDIMENT

SAMPLE#	SAMPLE LOCATION#	DEPTH (FT.)	TOTAL CONCENTRATION (ppm)
AQ0600	MW#1	5-7	159.2
AQ0601	MW#1	10-12	1324.0
AQ0602	MW#1	15-17	6196.0
AQ0603	MW#1	20-203	24.5
AQ0606	MW#3	5-6.5	96.1
AQ0608	MW#3	15-17	8.58
AQ0610	MW#5	5-7	0.004
AQ0615	MW#2	10-12	0.005
AQ0621	MS20	0-0.5	8.43
AQ0622	MS19	0-0.5	1.7
AQ0624	MS17	0-0.5	0.44
AQ0629	MS2	0-0.5	14.172
AQ0630	MS3	0-0.5	0.84
AQ0632	MS5	0-0.5	0.35
AQ0633	MS6	0-0.5	5.7
AQ0634	MS7	0-0.5	10.87
AQ0642	MS12	0-0.5	88.8
AQ0643	MS10	0-0.5	1.56
AQ0644	MS13	0-0.5	33.99
AQ0645	MS11	0-0.5	64.312

## SECTION 7: CONCLUSIONS

### 7.1: CONCLUSIONS

A wide variety of inorganic and organic pollutants have been detected in the surficial soils onsite. Several of these contaminants were also detected in the downgradient drainage paths at levels above area background. Soils present onsite lack vegetation or paving and are subject to potential migration offsite by wind action and surface water runoff.

Contaminants have been detected in the groundwater onsite as well as in the sediments of the monitoring well boreholes. The sediments of the 10-17 foot depths show the highest levels of contamination as well as the highest number of contaminants of all the samples collected. Some of the contaminants appear to have migrated, as indicated by analytical data, to the alluvial aquifer. If the alluvial aquifer is indeed in direct connection with the Silurian-Devonian aquifer (Ref. 7), the site could pose a threat to the major drinking water and commercial (e.g., A.D. Huesing Bottling Co. well) wells in the area. This threat is dependent on local flow and drawdown by production wells. Periodic groundwater sampling is needed to determine the variations of organics in the shallow groundwater zones.

The site is located on the ten year floodplain of the Mississippi River. The potential for downstream transport of contaminated soils during a flood incident appears to be high.

The fire hazards of the site must also be considered because of a small fire which occurred during the sampling activities (See Figure 7). Residues from the former contents of an empty drum apparently reached its flash point while the drum was being heated to remove old paint. This in turn caused the stack of the burner to flare and start a small roof fire. Even though fires of this type are small and easily contained, a major fire could present a potential for offsite migration of contaminants via runoff water from firefighting activities. However, it should be noted that the local fire marshal does not consider the site itself a fire and explosion hazard. These waters would eventually discharge into the Mississippi River. Commercial shellfish and fishing industries exist in the Mississippi within three miles downstream of the site.

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DOCUMENT LOG SHEET				
TDD# S07-9902-009A			PAN# 1166RVSFXX	
PROJECT NAME: R.V. Hopkins Site				
CITY/COUNTY/STATE: Davenport, Iowa				
PROJECT LEADER: GADT			EPA CONTACT: SCOTT HAYES	
COMPLETION DATE:			SOURCE OF FUNDS: (Shaded Area Below)	
09-30-99			CERCLA	OPA/CWA
			CEPP	
X	TDD: 09-27-99 LKS		AOC:	
DELIVERABLES				
	FORMAL REPORT:			
	LETTER REPORT:			
	FORMAL BRIEFING:			
	OTHER (SPECIFY):			
	VENDER PACKET:		ADMIN. REC.:	
	DISKS:		PRINTOUTS:	
	MEMO:			
	VERBAL BRIEFING-NO DELIVERABLE NEEDED:			
	OTHER (SPECIFY):			
	SITE SAFETY PLAN:			
	LOG BOOK(S) (HOW MANY):			
	PHOTOGRAPHS:		PHOTOGRAPHIC RECORD:	
	CONFLICT OF INTEREST (COI) FORM:			
	TYPING REQUEST FORM(S):			
	OTHER (SPECIFY):			
PROJECT LEADER INITIALS/DATE:				
Place An "X" Next To Document Being Filed. Include Date of Document, Name of Document (or brief description), Date Filed, and Your Initials.				

S07-9902-009A  
R.V. Hopkins Site

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